

Focus on Fortifications

*New Research on Fortifications in the Ancient
Mediterranean and the Near East*



Monographs of the Danish Institute at Athens, Volume 18



edited by

Rune Frederiksen, Silke Müth, Peter I. Schneider and Mike Schnelle

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FOCUS ON FORTIFICATIONS

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Ancient Mediterranean and the Near East

Fokus Fortifikation Studies: Volume 2

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Front cover: City wall of Herakleia on Latmos (photo: S. Müth)

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PREFACE

The present publication comprises the collected papers from a conference organised by the editors which took place over four intensive days, between the 6th and the 9th of December 2012, at the Acropolis Museum in Athens. The conference was organised through the Danish Institute at Athens (DIA) and the German Archaeological Institute (DAI) in Berlin, on behalf of the network *Fokus Fortifikation. Antike Befestigungen im östlichen Mittelmeerraum/Focus on Fortification. Ancient Fortifications in the Eastern Mediterranean*, and with much help from other network members. *Fokus Fortifikation*, which was sponsored by the *Deutsche Forschungsgemeinschaft* between 2009 and 2011*, brought together 27 younger scholars from several countries, all of whom were working professionally in the field of ancient fortifications. The network was initiated and directed by Silke Muth, Peter Schneider and Mike Schnelle. As a member of the network, Rune Frederiksen proposed that the Danish Institute at Athens be involved in the organisation of the conference and its publication, which was happily accepted. The conference was an important step in the network's activities, which will be described in detail in the Introduction, and its publication coincides with that of the network's research, presented in S. Muth, P. Schneider, M. Schnelle and P. De Staebler (eds.), *Ancient Fortifications: A compendium of theory and practice, Fokus Fortifikation Studies* no. 1, Oxford 2016.

The call for papers, published a year before the conference, saw an overwhelming response. Although we extended the programme by a full fourth day, it was still not possible to host all the proposed talks. The inevitable result was that many solid and interesting proposals had to be rejected. This is of course to be regretted – but it also confirmed that there is currently a great need for the sharing of information about ancient fortifications.

In addition to the papers submitted in revised form as printable articles, this collection includes three extra contributions from scholars who were not able to participate in the conference: Jessica Böttcher Ebers, Chiara Blasetti Fantauzzi and Salvatore De Vincenzo. We

are thankful we have been able to include their work in the printed volume.

We are greatly indebted to the *Deutsche Forschungsgemeinschaft* (DFG) and the Danish Agency for Science, Technology and Innovation for their financial support of the conference, and to both the Athens Department and the Division of Building Archaeology (*Architekturreferat*) of the German Archaeological Institute (DAI) for their cooperation. We also gratefully acknowledge the support of the many institutions based in Athens for lodging a considerable number of participants in their accommodation facilities during the conference: the French and Swiss Schools at Athens, the Athens Department of the German Archaeological Institute, and the Canadian, Irish, Netherlands, Norwegian and Swedish Institutes at Athens. The conference would not have been possible without the network members who helped with its organisation, from voting for the papers to introducing and chairing sessions or giving talks, for which we are deeply grateful. Warm thanks also go to the staff of the Danish Institute at Athens, Lone Gad, Søren Handberg, Hanna Lassen and Sine Riisager, for their effective work in the organisation and realisation of the conference. Furthermore, it was a great pleasure for us to hold our conference in the lecture theatre of the Acropolis Museum in Athens, and we would like to express our gratitude to its directorate for this opportunity.

Bringing more than 60 scholarly texts in three languages to publishable form for this volume has been an immense logistical task. We would like to express our gratitude to the more than 50 people who acted as anonymous peer reviewers, without pay, offering their efforts with the sole aim of improving the quality of research and furthering our common research culture. The copy-editing of the German and French texts for this volume was very carefully undertaken by Dorothee Fillies and Caroline Huguenot, and for the English texts by Liz Nichols, Anna Cara, Rune Frederiksen and Mia Gaudern. Last, but by no means least, we would like to thank Oxbow Books for publishing this book, and for their great patience, collaborative approach and friendly attitude.

The editors, March 2015

* DFG reference number: MU 2992/1-1; reference number of the conference grant: SCHN 1179/2-1.

INTRODUCTION

Rune Frederiksen, Silke MÜth, Peter I. Schneider & Mike Schnelle

The network

Consisting of 15 main members and an additional number of associate scholars, all of whom were either classical archaeologists or *Bauforscher*, the network *Fokus Fortifikation. Antike Befestigungsanlagen im östlichen Mittelmeerraum* (in short: FoFo) underwent an intensive three-year working process between 2008 and 2011. It discussed in a comprehensive and systematic way matters of methodology, the nature of sources, interpretative strategies and all sorts of other questions related to researching and interpreting this specific genre of built structure.

Eight years ago, when the plans for the network were just getting underway, most of its future participants were in charge of investigating particular city walls, fortified regions or other kinds of fortification complexes. They were all facing the same challenges in the processes of extensively surveying, documenting and analysing the built fabric, and in their attempts at procuring hard evidence for proper dating.

One may wonder why the topic of fortification achieved such popularity among scholars in the first decade of the third millennium. Was it that considerable advances in information technology and the greater availability of modern survey equipment made it easier to investigate complex, large-scale objects? Or was it simply that these monuments had been largely overlooked by previous generations of scholars? Or perhaps the recent interest in fortifications is due to a shift in consciousness about their significance as a source of cultural history, in comparison with other works of public architecture? Whatever the reason, fortifications can no longer be neglected, as they represent the largest proportion of building activity undertaken in the ancient world.

Fortifications of the ancient world cannot be reduced to mere military necessities, following such worst-case scenarios as a pitched battle lost by the inhabitants of a town or city, or a sudden and unexpected attack from enemies appearing in the territory at the urban centre of a polity. In addition to the military aspects of fortification, it must be understood that the erection of a wall meant a serious alteration of the conditions of a site. The built structure had to fit into everyday life: not only in practical terms, but also considering the actual visual appearance of the place from an aesthetic perspective. For all these reasons it is impossible to regard the fortifications of the ancient world as a response to a single dimensional set of exigencies. Instead, fortifications as large-scale buildings serving distinct needs on different levels are now widely understood to deserve proper multi-perspective interpretations in order to evaluate sufficiently their particular role in historical-political, local-regional, physical-topographical, economical and practical contexts, which are all mirrored by the buildings' individual design, execution and use.

A workshop at the German Archaeological Institute (DAI) in Istanbul in 2007, published in 2010, gave impetus to many of its participants to develop more systematic assessments of ancient fortifications. As part of a scholarly network in the funding programme of the *Deutsche Forschungsgemeinschaft* (DFG), hosted by the Institute of Classical Archaeology and the Excellence Cluster 'Topoi' of the Free University of Berlin, as well as by the Division of Building Archaeology (*Architekturreferat*) of the DAI, members followed a three-year programme of six meetings in various places, each dedicated to one specific aspect of fortification research.

The first meeting at the Technical University in **Cottbus** in October 2008 was dedicated to methodological

questions related to terminology, documentation and interpretation. The second meeting in April 2009 at the École Suisse d'Archéologie en Grèce in **Athens** was concerned with the ancient building experience, masonry techniques and the relevance of the natural environment to the concept, to the design and to the execution of fortifications. In the third meeting at the Ephesus excavation house of the Austrian Archaeological Institute (ÖAI) in **Selçuk** in October 2009, we debated the semantics of fortification, including its urbanistic, defensive and symbolic functions. Historical contexts were the topic of the fourth meeting at **Frankfurt** University in April 2010, where a critical debate took place about the quality of information procured from written sources and from the archaeological evidence. The fifth meeting at the Danish Institute in **Damascus** in October 2010 was centred on regional implications such as the fortification of whole regions, and regionally confined phenomena.

Our discussions of these questions were accompanied by three excursions to fortifications in mainland Greece, Asia Minor, Syria and Jordan, which followed or preceded the meetings in Athens, Ephesus and Damascus. The last meeting at the 'Topoi' house in **Berlin-Dahlem** in March 2011 was an opportunity to synthesise all the insights achieved and to discuss and agree on the best way of publishing our research.¹

Purpose, Programme and Outputs of the Conference

The purpose of the conference was to present the results of the FoFo network, but also to discuss our findings with a larger international scholarly community. Furthermore, it was conceived to provide an overview of the variety of approaches in current research and for the detection of blind spots in the network's concept. Since, for example, the majority of the network members were focusing on fortifications in the Eastern Mediterranean, we were particularly interested in including examples from the western part of the ancient world in the conference. Similarly, scholars were invited to present research on fortifications from early periods in the Mediterranean and neighbouring regions. A wider perspective, in terms of both chronology and geographical limits, was intended

to permit a better understanding of the development of fortification concepts through different cultural contexts and periods.

Basically, the programme of the conference with its seven sessions mirrored – more or less – the main topics of our network meetings. In addition we decided to include the origins of fortifications as a new topic, as well as reports on new research in Greece, where the conference took place and where many of the specimens of fortification architecture are actually located. Every session was chaired by a representative member of the network, who briefly introduced the outcomes and hypotheses derived from the network meetings and their comprehensive follow-up discussions over email and telephone. Other members contributed by exemplifying the basic issues within their own research.

SESSION 1: ORIGINS OF FORTIFICATIONS

The first session, introduced by Rune Frederiksen, was dedicated to the origins of ancient fortifications in the Mediterranean and the Middle East. The paper by Pascal Butterlin (Paris), read by Sébastien Rey (Paris/Durham), presented the results of the excavations at Mari/Syria, focusing on the relationship between urbanisation and the development of fortifications in Mesopotamia in the Early and Middle Bronze Age. In his own paper, Rey presented his research on early responses to sieges and fortifications in Mesopotamia, which was based on the re-evaluation of archaeological evidence in the light of the latest discoveries at Mari. Using a philological-historical analysis of written sources, Nathan Morello (Udine) assessed the significance of building fortifications in the context of Assyrian polities, which were concerned both with the expansion of power and with securing borders. A different aspect was stressed by Mike Schnelle's (Berlin) paper on Sabaeen fortifications, which concentrated on the collective significance connected to their erection as it can be recognised from the growing demands of representation and the rising efforts in execution. These first four papers on chronologically and geographically remote examples stimulated a comparative discussion on patterns of representation and development in classical antiquity, and on possible archetypes. These considerations were supplemented in the second session by the paper by Tobias Helms (Frankfurt/Main) on the fortification of Tell Chuera/Syria.

¹ In the preface, the *Deutsche Forschungsgemeinschaft* is mentioned as the supporting institution of the network. The Excellence Cluster 'Topoi' funded two of the three network excursions (Greece and Turkey), for which we are grateful. We are also indebted to all the institutions that hosted our meetings.

Thomas Alusik (Prague) shared the results of his latest investigations of prehistoric fortified sites in Crete, an island where fortification traditionally has been regarded as having had little significance in that era. Gabriele Cifani's (Rome) historical approach to assessing the early walls of Rome was complemented in the course of the fourth session by Peter Attema's and Timon de Haas' (Groningen) papers on early and middle Republican city walls in central Italy, and by Christian Winkle's (Stuttgart) reconsideration of the validity of Livius' writings as a historical source and its relevance for fortification studies. The current state of research on Iron Age fortifications in Central Anatolia during the early 1st millennium BC was discussed by Baptiste Vergnaud (Bordeaux), who emphasised their increased significance for urbanistic developments towards the middle of the millennium. Stefanie Hubert's (Erlangen) paper on early Mycenaean city walls pointed to burials immediately attached to gate buildings and integrated into the course of the curtains as a phenomenon particular to this culture. Parallels to this phenomenon were discussed during session 3.

The papers presented in session 1 and the ensuing discussions clearly demonstrated how the development of urban spaces and the building of fortifications were mutually influential until the rise of territorial states. Evidently, this interdependency in development can be recognised independently in all cultural contexts and across large stretches of time.

SESSION 2: PHYSICAL SURROUNDINGS AND TECHNIQUE: THE BUILDING EXPERIENCE

The second session was concerned with the relationship between natural surroundings, building concepts and building techniques. In his introductory talk, Peter De Staebler (New York) presented the results of the network's discussions on this topic. The first paper, by Jean-Claude Bessac (Lattes), was dedicated to methods of investigating techniques for building with stone, and on economical considerations. Starting from this methodological background, Bessac then developed various perspectives connected to his approach. For the Mesopotamian case of early Bronze Age Tell Chuera/Syria, Tobias Helms and Jan-Waalke Meyer (Frankfurt/Main) described the fortifications with regard to their construction, maintenance and further development. Ritual aspects in the erection of monumental defensive architecture were

considered by Ann Brysbaert (Heidelberg/Leicester),² who analysed the use of very large monolithic elements in the palace of Tiryns, such as the door lintels. According to her reasoning, the transport, location and use of such huge blocks are probably best understood by connecting them to ritual considerations. In this context it might be appropriate to assume a symbolic significance attached to the level of the building structure. The paper by Turgut Saner, Kaan Sağ and Ertunç Denktaş (Istanbul) focused on the walls of Larisa on Hermos. One of their central questions was whether the use of (Lesbian) polygonal masonry that features at certain segments can be limited to a particular period of construction and thus estimated as mirroring contingent conditions in the building process. Ayşe Dalyancı-Berns and Ulrike Goldmann (Berlin), together with Agnes Henning (Heidelberg), talked about economic and representational use of landscape and physical surroundings in the context of erecting the Acropolis wall on Monte Crocchia in south Italy. The structure of the Late Roman Imperial Palace at Romuliana-Gamzigrad in Serbia was presented by Gerda Sommer von Bülow (Frankfurt/Main) at the end of the second session. With its two distinct successive fortifications, this palace provided an intriguing case study. In sharp contrast to the fortifications of the first building, those of the later one are much exaggerated. Thus, according to the author, the second fortification ought to be regarded as a more symbolic than functional piece of architecture, emphasising the character of the Imperial palace, "rhetorically" using the motif of the Castellum as signifier. In the course of the discussions in session 2 it was made clear, especially with regard to the contributions of Bessac, Brysbaert, Saner *et al.* and Dalyancı-Berns *et al.*, that applied techniques and forms of fortifications appear to have much more to do with practical physical aspects related to particular political and military requirements than has previously been considered.

SESSION 3: FUNCTIONS AND SEMANTICS

The third session was introduced by Silke Müth (Athens), who presented the network's debate on functional aspects and semantic levels in the interpretation of fortifications. As a prominent example of impressive architecture, the Euryalos Fort at Syracuse/Italy was presented by Heinz-Jürgen Beste (Rome). While reporting on the building history of this highly defensive fort, Beste highlighted the development of its form and appearance and their

² This paper is published as "'Set in Stone'? Technical, socio-economic and symbolic considerations in the construction of the Cyclopean-style walls of the Late Bronze Age Citadel at Tiryns, Greece" in *Analecta Praehistorica Leidensia* Vol. 45, 2015.

visual effect with regard to the perception of the landscape. Another aspect was put forward by Jeanine Abdul Massih (Beirut) in her paper on Kyrrhos in Syria. This site allowed for an instructive assessment of the close interconnection of Hellenistic fortifications and urban layouts. The next two contributions were meant to challenge hitherto generally accepted assumptions on Hellenistic fortifications in Asia Minor. In his paper on the form, function and significance of the city walls of Perge in Pamphylia, Wolfram Martini (Gießen) explained plausibly that the southern part of the city wall, including the gate building on this side of the town, was strongly influenced by visual constraints. A significantly later dating of the city walls of Perge to early Imperial times, rather than the long-established earlier Hellenistic date, was supported by various kinds of evidence. Similarly, Peter Scherrer and Ute Lohner-Urban (Vienna) considered the phenomenon of Hellenistic pompous gates (*Prunktore*) as an erroneous artificial artefact created by earlier scholarship. In their contribution on the south-eastern gate of Side/Turkey, Scherrer and Lohner-Urban re-dated the building to the early Imperial Period, thus suggesting a generally later dating for the whole group of buildings of this type. Klaus Freyberger (Rome) then talked about the functions and semantics of fortification-like *temenos* walls in Hellenistic sanctuaries in the eastern Mediterranean. He demonstrated how the defensive character of the *temenos* walls served to maintain a perception of the sanctuaries as still being related to an urban community despite their remote location. Timm Radt (Stuttgart) then presented an overview of a particular group of Hellenistic fortification buildings, coining them as a special type of palace building. Though small in number, the buildings of this group have to be considered as a specific category, defined by their isolated position at remote sites at certain altitudes and by a particular combination of general fortifications and representational elements. The last two contributions to session 3 were concerned with the social-communicative qualities of Roman and Late Roman fortifications. Starting with the rites connected to the foundation of Roman towns, Saskia Stevens (Utrecht) investigated the significance of city walls as a symbolic medium. Melanie Jonasch (Berlin) then addressed the fortifications of rural communities in Late Antique Gaul, interpreting these walls as the result of a concentration of previously dispersed village communities that also used fortifications as a means for self-representation.

The discussions around the papers in the third session stressed the high significance of both the symbolic

and urbanistic-functional aspects of every individual fortification concept. Representative aspects have to be regarded as much more important than has previously been recognised, necessitating a generally increased awareness and sensibility towards this aspect in research. Many fortifications that appear highly defensive in purpose may simultaneously be interpreted from a representational perspective (e.g. Epipolai/Beste). There are many examples – on the other hand – of defensive functions which are unlikely to be of primary relevance for the design. The case of Perge, where the curtains followed the construction of the towers with considerable delay, may serve as one such example. Sometimes urbanistic aspects are of particular relevance for the design or modification of city walls (Kyrrhos/ Abdul Massih). Symbolic aspects can be clearly identified in the fortified residences or sanctuaries of the eastern Mediterranean (Radt, Freyberger); and also in the case of the Late Antique provincial fortifications in Gaul (Jonasch), the relevance of representational aspects seems to surpass military considerations. On the other hand, assumptions about the representative character of a well-known group of prominent buildings in Asia Minor connected hitherto to the Hellenistic period may be relocated to early Imperial Roman times, following the re-datings suggested for Perge (Martini) and Side (Lohner-Urban – Scherrer).

SESSION 4: HISTORICAL CONTEXT

The subject of the fourth session, the historical context of fortifications, was introduced by Eric Laufer (Vienna), with reference to the state of the network's research. Laufer explained both the potential advantages of and the problems with written sources and pictorial representations as regards research on fortifications. The archaeological evidence of the buildings themselves also belongs to this discussion, since it is understood as a primary source for a city's or a region's history. The implications for the reconstruction of the historical context, inherent in any interpretation derived from the assessment of archaeological evidence, have to be considered as the other side of the coin of source criticism.

The first paper presented by Micheael Kerschner (Vienna) departed from the archaeological evidence of the walls at Panayır Dağı in Ephesus, proposing a new hypothesis for the localisation of pre-Hellenistic Ephesus while simultaneously assessing the well-known written sources. Peter Attema and Timon de Haas (Groningen) explained their investigation of visual connectivity

between the settlements in the Pontine Marshes. The results from this analysis were interpreted as a clue to the historical situation of the area, as a region affected by heavy conflict during the period of the Early Republic. Although general critical concerns about the validity of Livy's historical writing abound, Christian Winkle (Stuttgart) in the following talk re-evaluated the reliability of Livy's accounts of the Roman city walls of the Middle Republic. According to Winkle, Livy should be considered as a reliable source for research into fortifications as regards general information, despite the fact that his accounts are often untrustworthy when it comes to concrete events. Pierre Ducrey (Lausanne) aimed in his contribution at a re-evaluation of city walls in terms of protection, specifically with regard to their psychological effect on (potential) aggressors and defenders. Furthermore, he focused on the inhabitants as victims after the successful siege and conquering of a town and suggested a reading of representations of cruelty as elements of commonly shared images derived from other, earlier cultures (e.g. Assyria). The next paper was given by Caterina Parigi (Rome), about the Athenian fortifications in the first century BC. She demonstrated convincingly that the connected buildings were much more present in the city than has previously been noticed. Isabelle Pimouguet-Pédarros' (Nantes) paper on the defensive system of Myra-Andriaké (Lykia), kindly read by Baptiste Vergnaud, demonstrated an attempt at analysing the different construction periods in the historical and functional context of the fortifications. In the last talk of session 4, Catherine Hof (Berlin) presented an approach using building archaeology to analyse the fabric of the city wall of Reseafa/Syria. The critical assessment of the evidence allows for a plausible account of the building history of the walls with substantial implications for their functions and for a general understanding of the town's development.

SESSION 5: THE FORTIFICATION OF REGIONS

The issue of the regional dimension of ancient fortifications and the state of discussion within the network on this topic were presented by Sylvian Fachard (Providence). Claire Balandier (Avignon) then demonstrated the methodological considerations for the study of regional systems of defence and made explicit the implications inherent to her historically oriented archaeology of fortifications. Matthieu Guintrand's (Avignon) paper on Laconian fortifications in the Classical period served as an example of an investigation informed by a regional perspective on defences, showing that the Laconian territory was not as widely unfortified as is generally

presumed, even though the defences mostly appear in connection with perioecic settlements in the border regions and were obviously only strong enough to hold off attackers for a little while until a rescue army arrived. As a further case study arguing for the relevance of a regional perspective, Yannis Nakas (Athens) talked about isolated tower buildings in Molossia in Greece, interpreting this group of single buildings as elements of a regional defence network. Pierre Moret (Toulouse) considered defensive buildings in Spain dating to the period between 236 and 19 BC, which were understood to reflect the tensions between imperial strategies and local concerns. Douglas Underwood (St. Andrews) assessed the city walls in the region of southern Languedoc in France with respect to their supposed role as instruments of regional and imperial strategies. With regards to a coherent regional system for the defence of the Mithridatic kingdom, Emine Sökmen (Ankara) interpreted the fortifications of the Tokat Region in Turkey as closely related elements. Josip Višnjić (Svetvinčenat) presented the barrier running through the Julian Alps (Claustra Alpium Iuliarum) as an extended fortification system from Late Antiquity, providing an example of a particular form of regional fortification not represented by any other paper in the conference. The last contribution to session 5 came from Mihailo Milinković (Belgrade), who discussed fortified settlements in Illyricum. Generally referred to as 'Early Byzantine Fortifications', Milinković instead regards these settlements as a basic unit pertinent to the migration period. Correspondingly, this paper also addressed the relation between settlement development and changes in threat scenarios.

As a result of the discussions of session 5, it was generally agreed that any reconstruction of regional fortification systems should be attempted with caution. In many cases a local rather than a regional significance can be identified with certainty (Fachard). Nevertheless it was still possible to recognise coherent systems in different regions, while e.g. in Laconia, the fortifications surrounding perioecic settlements were obviously erected on their own initiative (Guintrand).

SESSION 6: REGIONALLY CONFINED PHENOMENA

The sixth session was concerned with regional characteristics of fortifications and with phenomena that qualify as regionally confined. The state of research on this topic, as discussed in the course of the network proceedings, was presented by Silke Müth in her introduction. Stephan Schmid and Caroline Huguenot (Berlin) talked

about the defensive installations of Iron Age *oppida* in the southern Drôme region in France, and about their possible impact on the perception of the landscape. Keven Ouellet (Montreal) reflected on the possibility of recognising traditions and regionalism in military architecture, assessing the city walls of the colonies of Andros; some technical features observed in this context can be identified in other regions as well. Britta Özen-Kleine (Saarbrücken) presented the fortification system of the Lelego-Carian capital Pedasa, located on the Halikarnassos peninsula, and its regional particularities. Characteristics of this region were also discussed by Poul Pedersen (Odense) and Ulrich Ruppe (Frankfurt/Main) in their paper on the Late Classical and Hellenistic walls of Halikarnassos, Priene and other fortifications in Caria and Ionia, focusing on the validity of certain features as markers of regionalism. The application of polygonal masonry in fortifications in central Italy was addressed by Sophie Helas (Bonn), who defined the scope for the usage of this building technique in Italy and analysed its semantic aspects as a marker of the culture and history of Latium. Concerning the fortifications in the eastern Mediterranean, Michael Eisenberg (Haifa) presented their development in the Decapolis region based on the example of the city of Hippos on the eastern shore of the Sea of Galilee. Moving further east, Pierre Leriche and Segolène de Pontbriand (Paris) presented their reflections on the defensive architecture in Bactria, focusing on the brick architecture of the Kushan period.

As a result of these papers and the ensuing discussions, it was concluded that in rare cases particular phenomena can be regarded as confined to a specific region. This might in turn serve as an indicator for a nearly instantaneous spread of knowledge about defensive techniques even to remote regions, corresponding to the quick transmission of knowledge about poliorcetics. Though still a valuable category, regional characteristics are limited to the level of constructional details (e.g. 'double corner bond'/Pedersen – Ruppe, 'ladder pattern masonry' in the Andrian colonies/Ouellet). It was concluded, conversely, that particular forms of fortification should be described as trans-regional, since they were adapted in different regions with distinct purposes (polygonal walls in Italy/Helas, fortifications of places on prominently exposed sites in the Iron Age *Oppida* of the southern Drôme region/Schmid – Huguenot, 'Indented Trace'/Ruppe).

SESSION 7: THE FORTIFICATIONS OF ATHENS AND NEW FIELD RESEARCH

As a tribute to the venue of the conference, the seventh session was dedicated to the presentation of projects concerned with the city walls of Athens and with new research on fortifications in Greece. Konstantinos Kissas and Vassilis Tasinos (Corinth) presented the latest results of the excavations at the archaic city wall of Corinth. These recent excavations allow us to estimate the monumental vastness of the city's fortification in these early times. Vassilis Lambrinoudakis (Athens) then talked about the history of the ancient walls of Palaioimania in Akarnania and about their function, before Anna Philippa-Touchais (Athens) shared her results on the Middle Bronze Age fortifications of the hill of Aspis, the lower of the two acropoleis of Argos. The contributions of Nikos Tsoniotis (Athens) and Elisa Bazzechi (Cologne/Bologna) broadened our knowledge about Late Antique fortifications in Greece, a topic rather neglected in past research. Tsoniotis presented the evidence resulting from excavations in the Venizeli house, explaining their relevance to the post-Herulian wall of Athens. Bazzechi's paper reflected on the often underestimated significance of fortification walls in the cities of Late Antiquity based on a case study on Athens. The discussion underlined how different research projects on city walls in Greece, carried out in these years, bring to light impressive new data on Greek fortifications, sometimes changing our knowledge and views considerably, here particularly for the very early and the very late periods of Antiquity.

EVENING LECTURE

On the second day of the conference, Pierre Leriche was invited to give an evening lecture, as a scholar who has played a key role in advancing knowledge on ancient fortifications for several decades. Leriche described the advances in research since the 1970s and 1980s, drawing an arc through to the latest developments and up to the work presented at the conference itself. Starting with the ground-breaking colloquium *La fortification et sa place dans l'histoire politique, culturelle et sociale du monde grec* in Valbonne, France, in 1982,³ Leriche detailed the developments in this field over the past three decades, pointing out many relevant aspects and new possibilities for research while emphasising the different ways in

³ For the publication see P. Leriche and H. Tréziny (eds.), *La fortification dans l'histoire du monde grec*, Paris 1986.

which fortification studies contribute to the deepening of our understanding not only of political, but also of many social processes in the ancient world. Recognising the FoFo network's approach and achievements, he expressed the hope that it may provide a further impulse for stronger institutional backing for this field.

FINAL DISCUSSION AND SYNOPSIS

In the course of the final discussion, participants generally appreciated the wide scope of the network's approach to investigating fortifications, both in terms of the issues addressed – methodological and interpretational considerations – and with regard to the chronological and geographical range of contributions, from Bronze Age buildings in Mesopotamia and Greece to case studies from Late Antiquity in France, the Balkans and Syria. It turned out that the basic patterns of approach and assessment, developed by members of the network alongside their own research activities on fortifications in the eastern Mediterranean, are generally applicable to all other fortifications of antiquity. The feedback from the conference's call for papers, which ultimately materialised at the conference, documents the variety of questions and approaches already being realised in current research. Against this background, the network's

systematic approach to a comprehensive exploration of diverse but essential issues was recognised as a valuable step towards understanding and communicating the potential role of fortification studies in various other archaeological and historical fields.

Many participants, including the network members and additional interested scholars, expressed the wish and need for further networking in a broader framework, including the conference participants and additional interested scholars. It was therefore taken into consideration that after the publication of these conference papers, a larger network of fortification researchers ought to be set up and institutionalised by members of the *Fokus Fortifikation* network and the conference participants, offering a platform for the organisation of further meetings, workshops and conferences on particular topics or methodological questions. With these considerations in mind we hope that whereas the conference and its publication represent an immediate and concrete end goal of the fortification network, the publication may also serve as a significant impulse to sustain the focus on fortifications as well as to inspire the integration of this category of ancient architecture even more into the description and interpretation of the ancient world in general terms.

STUDYING ANCIENT FORTIFICATIONS: A PROMISING AND EXPANDING FIELD

Pierre Leriche¹

Abstract

Interest in the study of fortifications is steadily developing and this Fokus Fortification symposium is the fifth on the topic since the Valbonne conference in 1982. We know today that this type of study is a potential carrier of information not only in terms of defensive architecture and techniques of war, but also on the history of a city or regional events, on society and on many other topics, the trace of which a fortification bears, from its construction to its abandonment or destruction. On the other hand, to the developing study of stone fortifications in the Mediterranean world, has now been added that of fortifications of adobe and rammed earth in the Near East, a technique which was reintroduced into Greek architecture by Alexander and his successors.

On the field itself, the old elementary techniques of clearing have given way to a more modern archaeology producing drawings and plans of good quality. Through observation of the stratigraphy, dating historical phases has become more reliable, allowing the revision of numerous old chronologies, verification of the relevance of historical texts or a review of the interpretation of inscriptions. The excavation of fortifications opens new research directions for the construction of fortifications of stone or earth, the functioning of a construction site, the speed of its implementation and the evaluation of the final cost of a fortification building. Archaeology also sheds light on the relationship of the fortification with town planning, the technique of city sieges, and on a fortification's heritage.

It is also essential that the archaeologists do not confine themselves to the stratigraphy, forgetting thus to characterize the fortification with all its architectural features and its technical specifications of construction. Finally, it is important to develop a strategy of excavation that will allow good preservation of the monument.

Many signs show that the study of fortifications is growing regularly. This makes us optimistic for the future of teichology - a still young discipline which seems to have a promising future.

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Ancient fortifications as major monuments

Studying fortifications was considered, until recently, a technical discipline best left to architects, retired military officers or specialists in building techniques, far removed from social, artistic or philosophical studies. However, as human creations, fortifications are, directly or indirectly, the result of the convergence of various social elements. That makes each fortification unique. Whatever the time of its construction and function, a fortification is a witness of a certain period and of a particular society. It is a monument that has been conceived and built during a specific moment of culture and human thought.

This polysemic character of any fortification opens the way to different studies exploring technical, political, social, historical and symbolic questions about fortifications. First, its appearance can inspire admiration for its strength or for the aesthetics of the construction. A rampart is supposed to convey to the enemy an impression of power and fear and to those who live behind the wall, a sense of reliance upon the commander and a feeling of security to the population.

A second aspect, often neglected in spite of its historical importance, is that an urban fortification is also the framework of city life during times of peace, which generally comprise the vast majority or even the entirety of a city's existence. A fortification has a major practical impact on the everyday life of the population in terms of circulation, communication with the countryside, water supply, drainage, evacuation of rubbish, and so on. This often means difficulties: if a rampart constitutes a barrier against outside danger, it can generate feelings of reclusion and even of exclusion for some parts of the population inside. This must be taken into account by historians.

The symbolic aspect of a fortification is, of course, also very important, combined with political, ideological and even religious functions, either in the civic context or in an imperial system (e.g. Babylonian, Hellenistic, Roman etc.). However, this dimension takes a distinctive form in each different society. That calls for a specific approach and a proper lexicon for each case.

All these aspects are important when we consider the role of a fortification. However, while re-examining the fundamental and epistemological aspects of teichology, it is important to underline the practical aspect (military, architectural, urbanistic) of this type of monument.

We must keep in mind that ancient and medieval fortifications were not really works of art. A fortification is primarily a military monument, a functional building in which pragmatic necessity, as with every war creation, is paramount. It should principally be studied as such and I will focus mainly on this aspect after considerations on the history of teichology. Finally I shall share some reflections concerning new perspectives.

Teichology. The progressive birth of a science

1. THE FIRST STEPS

The study of Classical fortifications through the ancient authors, was a source of inspiration for strategists until the 19th century (cf. de Folard's commentary on Polybius). Then, with the predominant role of artillery, it became mainly a hobby for retired officers interested in military architecture, strategy and weaponry. Finally, following the Contemporaneists and the Medievalists (like Viollet-le-Duc), the Classicists decided to consider the study of the history of war and of ancient fortifications as a genuine scientific discipline.

A particular discussion concerned the Greek attitude towards a fundamental choice: to fortify the city or to engage in active defence (cf. Athens/Sparta, Philip of Macedon). After the First World War, historians became interested in the question of siegecraft and defence systems in light of their recent experience in military trenches. This resulted in a re-examination of the texts in order to find descriptions or mentions of sieges. Then came debates about the relationship between a fortification and the image that a city wanted to project – cf. towns in Augustan Gaul asserting their presence through prestigious fortifications (e.g. Augustodunum) – and, of course, the question of Tyche with her turreted crown as an image of the city.

All this potential information gave way on a reflexion about the place of fortification in history. The Classicists, even if they were familiar with the *Iliad* and the Mycenaean fortifications of Tiryns and Mycenae, professed that the real beginning of Greek fortification was in Classical Greece. This conception, however, does not take into account the fact that in the Near East, the creation of fortifications is contemporaneous with the first towns since the third millennium BC. We know of the existence of strong, well-designed mudbrick

fortifications at Habuba Kabira (Uruk Period) on the Euphrates river and, then, at various other sites in Mesopotamia, Anatolia² and so forth. In fact, in every ancient sedentary civilization, fortification was the normal solution for those in charge of a city or of a territory, the normal method of self-preservation.

An exception occurred in the first half of the first millennium BC in ancient Greece, when fortifications were considered a danger to the morale of the citizen-hoplites. However, after the Greco-Persian Wars for Athens, and the 4th century for Sparta, fortifications and poliorcetics played an increasing role in the history of the Greeks and reached their acme in the Hellenistic period, driven by Philip of Macedon's decisive action.

2. THE FIELD

As I mentioned above, studying the remains of an ancient fortification can produce a considerable amount of data on various levels, due to the evolution of the scientific methods available at the start of our third millennium.

"In no other sphere of ancient Greek building do we possess such extensive remains".³ Yet, in spite of such evidence, these monuments were depreciated in favour of temples, agorae, palaces or theatres, richer in inscriptions and masterpieces of art. This is the reason why, for so long, the study of stone fortifications was often the work of only a few scholars or groups of architects and designers (e.g. in the context of the Morea (Greece), the Phoenicia and Syria expeditions, conducted in the 19th century) who observed still-standing remains in the field and produced high quality drawings of specific details. Progressively, works focused on important sites; the number of publications on Greek and Italian fortifications began to grow after the First World War and included the fortifications of Messene, Mantinea, Attica and the Argolid, Paestum and Syracuse.

On the other hand, the study of clay or mudbrick fortifications, which are more difficult to explore, started in the 20th century, from Egypt to India, essentially by drawing plans of the mounds and by cutting trenches through them (Qadesh/Tell Nebi Mend, Charsadda, Jericho, Bactra, Samarkand and others).

Of course, stone fortifications offer the best opportunity for establishing their plan ("wall trace" whether geometric or adapted to the topography), their elevation and their characteristics (structure, aspect, masonry). It is generally easy to describe the different components of the defence (towers, curtain walls, gates, posterns, presence or absence of a moat, materials, decoration – if any), and to judge the aesthetic qualities of their design and execution. This was of particular interest to architects and military professionals who very precisely calculated the correspondence between the progress of artillery and the form of the towers, the distance between the towers or the influence of the hoplite equipment on the design of the gates and posterns (with the ritual mention of soldiers carrying their shield on the left arm, leaving their right side virtually uncovered).

It is sometimes possible to use inscriptions set in masonry ("Mauerbauinschriften"⁴), but these are generally scarce (except for Thasos) and must be used very cautiously. More frequently, dating was inferred via ancient historical or literary texts referring to the construction of walls, conflicts and sieges, among other things. The problem is that the references to historical events are sometimes used without enough caution: how can one be sure that the remains of a given rampart correspond exactly with a particular historical event (cf. mistakes about the identification of the sieges described by the texts at Troy or Jericho)? In the same manner, it is difficult to date the construction of a rampart using a reference to a conflict (which inevitably happened at a later date). Let us also mention texts which could be later reconstructions: e.g. the erroneous attribution of the construction of the walls of Jerusalem to Elias (cf. C. Balandier 2014).

The following step was the development of architectural and technical comparisons based on plans, wall stonework or mudbrickwork or art history. However, dating based on art history has little place in this context (e.g. it is nonsense to describe a Hellenistic fortress by reference to the golden number). Dating a plan (sometimes difficult to determine) by comparison with another fortification that has supposedly been dated (using what method?) or by analysing wall building techniques (R.L. Scranton 1941, often erroneous and now obsolete), remains a highly problematic approach.

² Rey 2012.

³ Winter 1971, x.

⁴ Maier 1959-1961.

Since the middle of the 20th century, using the significant body of documentation and new information resulting from the development of the archaeology of fortifications, specialists in ancient civilizations decided to conduct excavations on fortifications in the Mediterranean, the Near East (practically inaccessible before the First World War) and the Soviet territory.

The result of such an important activity is that Aymard and others after him called attention to the fact that war, and especially fortifications, were wonderful sources of fundamental data for historians.⁵ Through its architecture and technical proficiency (building, tactical and strategic), through the type of weapons and machinery employed, a fortification informs us on the period of building, the potential enemy, and the political ambition and power of the sponsor of its construction. Traces of assault, of decay or restorations, can also provide important information on the general history of a city.

After 1970, in accordance with this evolution, there appeared fundamental studies by F.E. Winter (1971), Y. Garlan (1972), A.W. Lawrence (1979) and A. McNicoll and N.P. Miller (1997) as well as photographic or pictorial books by H.F. Musche (1963) and J.-P. Adam (1984) concerning the Greek military architecture. These were essentially based on external observation of the monuments and partly on texts by Aineias the Tactician and Philo of Byzantium.

3. THE SCIENTIFIC ARCHAEOLOGICAL APPROACH

This sudden abundance of descriptions and of scientific data bases opened the way for researchers to establish topo-chronological typologies which necessarily imply the dating of the fortifications in question. And it was precisely at this moment that a new dating process emerged: the techniques of modern archaeology.

In the middle of the 20th century, M. Wheeler excavated fortifications in India and founded scientific archaeology with a new method: the use of stratigraphical trenches and soundings which provided many new kinds of information on fortifications. With this technique it became possible to date the construction and the different phases of a fortification through their correspondence with soils and levels containing ceramics, coinage, etc. This method at last provided good quality datings.

Then, from the 1970s, numerous groups of archaeologists in collaboration with topographers, ceramologists and other specialists began to work on fortifications. Apart from the stratigraphical methods, other new methods were employed:

- Surveying the trace of the walls by kite, plane or satellite photographs, and magnetometry.
- Drawing fortifications with all the necessary details, like any other archaeological monument, with total stations, scanners and other precise instruments which give exact measurements and allow the realization of high quality plans. This precision can offer ways to determine the original graphic design used to build the city and the evolution of the original topography of the place.
- Establishing the carefully observed context of ceramics, coins or inscriptions to obtain good quality dated information; the content of an inscription will be interpreted differently if the inscription has been found in its right place, if it has been removed or if it has fallen from another place.
- More recently, archaeomagnetic dating techniques and C14 analysis.

All of these techniques are now widely employed worldwide, from the Mediterranean world to the Far East, and a strategy for excavating fortifications has now been seriously established (Leriche, Istanbul 1993).

An abundant literature

With such instruments, the archaeological research developed strongly, creating the need to assess the results and to publish.

This Fokus Fortification symposium is the fifth one dedicated to Ancient fortifications, since Valbonne colloquium (1983), followed by the two symposia in Istanbul (1993, 2007) and the round table in Paris (ENS 1999).

Two collective publications (Van de Maele and Fossey *Fortificationes Antiquae*, 1992, Prost (ed.), *Armées et sociétés de la Grèce classique*, Paris, 1999) have been dedicated to this topic.

⁵ Aymard 1959, 3-15.

In the last twenty years, numerous new studies have been published about ancient fortifications, war and siegecraft in the Classical world and the Near East:

- 1992: Van de Maele, Fossey: Greek and Roman fortifications;
- 1993: Wightman, Fortifications of Jerusalem;
- 1994: Breton, Ancient fortifications of Southern Arabia;
- 1997: Moret: Iberic fortifications; Napoli: Linear Roman fortifications;
- 1999: Kern, *Ancient siege warfare*; Prost: Armies and societies in Ancient Greece;
- 2000: Rizza: Greek fortifications of Leontinoi; Pimouguet-Pédarros: Ancient fortifications of Caria;
- 2003: Morillo, Cadiou, Hourcade: Defence and territory in Roman Spain;
- 2004: Typaldou-Fakiris: Fortified cities of Phocis; Gras, Tréziny, Broise: Archaic Megara Hyblaea;
- 2005: d'Agostino, Fratta, Malpede, Fortifications of Cuma; Saez Abad: *Greek and Roman artillery and poliorcetics*;
- 2009: Ducrey: War and warriors in Ancient Greece;
- 2010: Cipriani, Pontrandolfo: Walls of Paestum; Fauchères, Pimouguet: Siegecrafts of Rhodes;
- 2011: Frederiksen: Archaic Greek city walls; Grandjean: Walls of Thasos;
- 2012: Fachard: Eretrian territory and its fortifications; Rey: Poliorcetics in Bronze Age Near East
- 2014: Balandier: Fortifications of Achaemenid and Lagid Syria-Palestina.

Since the 1993 symposium in Istanbul, many new discoveries or important works on ancient fortifications can be listed (without claiming completeness). Those of Marseilles (France) or Jebel Khalid (Syria) have already been published, others have preliminary publications: Roman Limes in Germany and Great Britain; Messene, Thasos (rampart and isolated towers) in Greece; Pergamon and Karasis in Anatolia; Amathous and Paphos in Cyprus; Apollonia in Albania; Merv, Kampyr Tepe, Termez, Samarkand and Bactra in Central Asia, etc.

Along with this expansion of precise research, we can also mention the emergence of new questions regarding the relationships between fortification and territory, fortifications and roads, frontiers, limes, water supply, and so forth. For example, the problem of the function of isolated towers like the ones between Attica and Boeotia; the typology and hierarchy of the functions

of fortifications (regional walls/ urban fortifications/ *phrouria*, *ochyromata*; adaptation of defensive designs to artillery and siege machines; reflections on the *makra-teiche* (long walls) and on the reduced defended urban territory; country long walls like those of Iasos; oasis walls like those around Merv or Bactra.

Studying fortifications: new directions appear

1. ARCHITECTURE

Stone architecture

- Studying the stone building materials and their respective qualities used to erect the walls, as well as the technique of building can inform us about the history of fortifications and monuments.
- Important progress has been made on stone cutting in terms of quarries (Thasos, Europos-Dura, Petra, Yemen), choice of stone, instruments, organization of building, and workshops, by J.-Cl. Bessac and T. and M. Kozelj.
- Significant progress has also been made concerning stoneworks and their function, types of ashlar masonry, rubble techniques, *emplecton* walls, “Phoenician” walls. Special mention must be made of the modular header-and-stretcher technique as seen in the stone fortifications of Ibn Hani in Syria (Fig. 1), a building technique which was frequently employed in Near Eastern Hellenistic fortifications.
- However, many questions remain to be answered regarding the polygonal work, the plan and design of the fortifications.

Mudbrick architecture

Mudbrick fortifications, very common in the Bronze Age Mediterranean, continued to be built in Archaic Greece. On the other hand, from the end of the 5th century BC, Greek fortifications were all built in stone, thus giving rise to the idea that Greek fortifications were necessarily stone constructions. This resulted in a total lack of interest in the mudbrick fortifications which, nevertheless, were built by the Seleucids, the Parthians and the Kushans. Less than a century ago, A. Foucher found only mudbrick constructions on Bactra citadel and concluded from the lack of stone masonry that Greek Bactra was a mirage.⁶

⁶ Foucher 1942, 113–5.



Fig. 1 Ibn Hani (Syria): Remains of the stone modular header-and-stretcher coffering of the southern curtain wall. View to the west (© AURORHE).

In reality, the Macedonians adapted their designs to mudbrick technology and built powerful ramparts in the East. The evolution of the mudbrick forms and sizes and the marks they sometimes bear – generally made by hand – provide us with useful data on the period of building fortifications.

2. GENERAL ASPECTS

Economy of the construction

Until recently, the cost of a rampart, the duration of the work, and the number of workers, were found through texts or inscriptions. However, experimental archaeology applied to the walls of Europos-Dura on the Euphrates under Bessac's supervision proved to be revealing. Rostovtzeff had written that the building of these fortifications was slow and remained unfinished after one and a half century.⁷ In contrast, J.-C. Bessac proved that with one thousand workers, the Hellenistic

stone fortification of Europos could have been completed in only three years.

Fortifications and urbanism

In the case of an urban fortification, the relationship between the military logic versus urban logic were mainly treated through general considerations (see Hoepfner and Schwandner, and E. Will on Europos-Dura).

Nowadays archaeology enables us to compare the process of fortification with that of town planning. Such type of question has been examined with careful consideration by Y. Grandjean in Thasos and H. Tréziny in Megara Hyblaea (both published). Some publications have been devoted to the ancient techniques of groma surveying. Regarding Europos-Dura, G. Thébault – a professional topographer-land surveyor who has supervised the design, creation and execution of urban projects – will shortly be publishing the method used to create the Hippodamian town according to the general defensive principles of this period and to the topographic reality of the plateau, wadis and river (Fig. 2).

Studying siegecraft

The archaeological traces (organization, materials, processes, breaches, saps) of assaults against fortifications have always been studied with great attention in the Greek, Roman and Near Eastern worlds. Since Marsden (1971) and Landels (1978), attention has been drawn to the progressive adaptation of conceptual and technical progress in building equipment and techniques such as scaffoldings, cranes, stone cutting and wall building, to the technology of siege machines (*helepoleis*, artillery etc.). We have a good knowledge of the *mekhanai* which were invented by engineers and skilful personalities from Archimedes to Philo of Byzantium or Hero of Alexandria, and described by Vitruvius or Pliny. The machines created to build enormous buildings or temples like that of Didyma were very quickly adapted to the art of war.

After the assault ramps that have been explored in Palaipaphos (Cyprus), and Lachish or Masada (Israel), a new opportunity is offered in Europos-Dura to study the construction of Sasanian and Roman assault ramps, tunnels and mining techniques (Fig. 3). Since S. Rey's publication on Near Eastern fortification, it appears clear that this technology was directly influenced by the technical knowledge of the previous periods.

⁷ Rostovtzeff 1941, 484.

Heritage

When excavating a fortification, it is imperative to always consider the preservation of the remains and to design excavations which will result in the best possible preservation of the monument after digging.

Fortification and history

In the past, few scholars were really not concerned with the excavation of fortifications because of the dimensions of such monuments and many historians of the texts thought that the role of archaeology was only to illustrate history. Nowadays, the gap between different disciplines has been seriously reduced and, it is now generally accepted that the digging of a site's fortifications – whatever the period in question, but especially regarding ancient history – can contribute to determining and dating the main phases of a site. Thus, not only the general circumstances of the construction of a wall, but also a great deal of information on the life of a town or a region and even general politics in antiquity can be collected (see Balandier).

However, many questions remain to be addressed:

- What is the purpose of a fortification in relation to the historical period of its creation? Construction of military architecture cannot be the result of a private initiative. One has to determine who created the fortification. In the Greek world between the 8th and the 6th centuries BC it is the city itself. After the triumph of Macedonia, however, it is generally the king or the emperor. Inscriptions are therefore very useful for determining who paid for a fortification: the town or the imperial administration and why?⁸
- How can the history of a fortification be linked to the main events of the history of the town? Can we utilize data from the fortifications of a city (foundations, attacks, but also periods of power or of weakness, date of abandonment etc.) to check the texts relative to that city? (see later for a preliminary answer).
- What is the role of Near Eastern knowledge on the development of pre-Hellenistic Greek fortification? What happened to this knowledge after the Macedonian conquest of Asia? Did the Near Eastern science of warfare have any influence on Hellenistic, Parthian, Roman and Sasanian arts of fortification and poliorcetics? For example, how can we explain the fact that the design of the main fortification gate at Europos-Dura is exactly the same as that of the Near Eastern Bronze Age gates of type D (a corridor between two long parallel towers and a passage controlled by three gates reinforced by three pairs of pilasters) (Fig. 4). Or, is there a link between the embankments built on both faces of the Europos-Dura fortifications against the Sasanian attack and the ancient Mesopotamian tradition of embankments as described in S. Rey's recent publication?
- Studying the mentality: What does it mean to live in a fortified town? (cf. P. Gros in *Fortificationes Antiquae* 1992); what was the behaviour of the inside population during a siege in antiquity? Aineias the Tactician gives some information, but it seems to me that we can explore this question further.

Mistakes to avoid

In the course of my research, I have noticed some recurrent problems in the study of ancient fortifications.

1. THE FIELD

- Paradoxically, the first thing I will refer to is the mistake of not studying the fortifications of a town in order to establish its chronology. This negligence results in ignoring a useful chronological framework for the monuments of the site under study. For example, the problems of the still imprecise chronology of the famous temple of Takht-i-Sangin in Tadjikistan (Fig. 5). On the other hand, compliments to P. Scherrer and U. Lohner-Urban who finally, on their initiative, closed the recurrent discussions about the dating of Side's fortifications.
- Another mistake is to describe a system of fortification by its general external aspect, without checking the chronology of its different parts. This leads to the integration of later extensions or modifications in the original system and, thus, to critical errors. For example, many considerations concern the *diateichismata* and the assumed different categories of population in a town. But, it appears that such considerations would not have been raised if their authors had checked the dates. I have in mind urban sites which supposedly present such *diateichismata* where, in reality, the internal walls were built long after the city's acme (Amathus) or even after its abandonment (Ai-Khanum).

⁸ Rebuffat 2012.

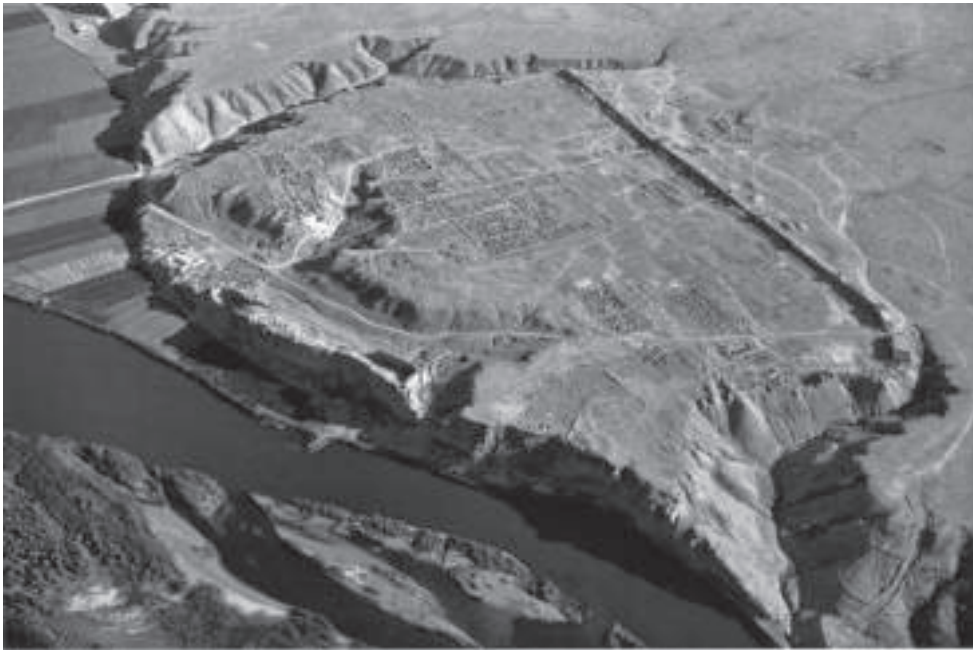


Fig. 2 Europos-Dura (Syria): Aerial view to the south (© MFSED).



Fig. 3 Europos-Dura: Internal face of stone modular header-and-stretcher coffering of the western curtain with remains of the parapet and tower 15. See the entry of two countermines and the top of the Sasanian assault ramp. View to the west (© MFSED).

- It is also strange to explain the building of a rampart by the existence of a current conflict: it is evident that a fortification must be erected in time of non-belligerence. However, it is significant to know whom the builders considered to be their potential enemy. A change in the type of enemy modified the design of Central Asian fortifications: they were massive in the Macedonian period to resist the Greek machines, but after the collapse of the Macedonian power, they became lighter, with galleries provided with numerous loopholes to better confront cavalry.

2. THE TEXTS

- Similarly, we must be very cautious with texts, especially those written long after the event. How many authors cheerfully quote Malalas to describe the foundation processes of the four big cities of Northern Syria by Seleukos I, without taking seriously into account the fact that these events happened six centuries earlier?
- There is also the danger of misinterpretations due to schematic concepts. On the evidence of a mention in *Parthian Stations* by Isidoros of Charax, Cumont and Rostovtzeff concluded that Nikanor, general of

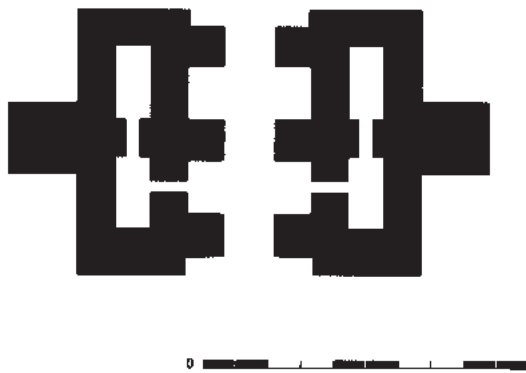


Fig. 4

Above: Near Eastern type of triple pincer gate (Rey 2012, fig. 65; © S. Rey).

Right: Europos-Dura: Schematic plan of Palmyra gate (drawing by M. Pillet; © MFSED).

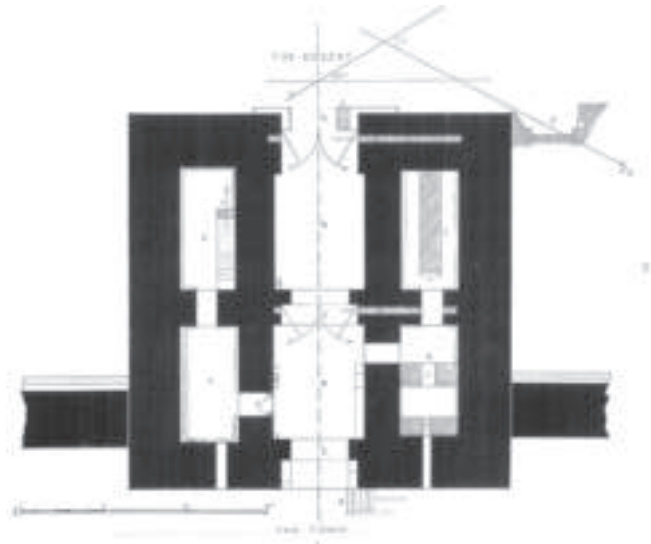


Fig. 5 Taht-i-Sangin (Tajikistan): Aerial view of the excavation of the Oxus temple in the middle of an untouched fortified city. View to the south (© MAFOuz de Bactriane).

Seleukos I, had established the city of Europos at the end of the 4th century BC. However, the stratigraphy shows that the urban surrounding wall was built, in parallel with the town on Hippodamian plan, only in the middle of the 2nd century BC. In fact, what was founded at first was a *phourion* populated with soldiers from Europos in Macedonia. One and a half centuries later, in the middle of the second century BC, this

fortress became the citadel of a real city surrounded by the powerful rampart we still see today (Fig. 6). In this case, Cumont and Rostovtzeff followed the schema outlined by Plutarch, Appian or Libanios, put forward by Bouché-Leclerc, Tscherikower and many others historians, and illustrated by the then recent discovery of Olynthos and Priene. In this period of colonial ideology and when the only means to obtain dates

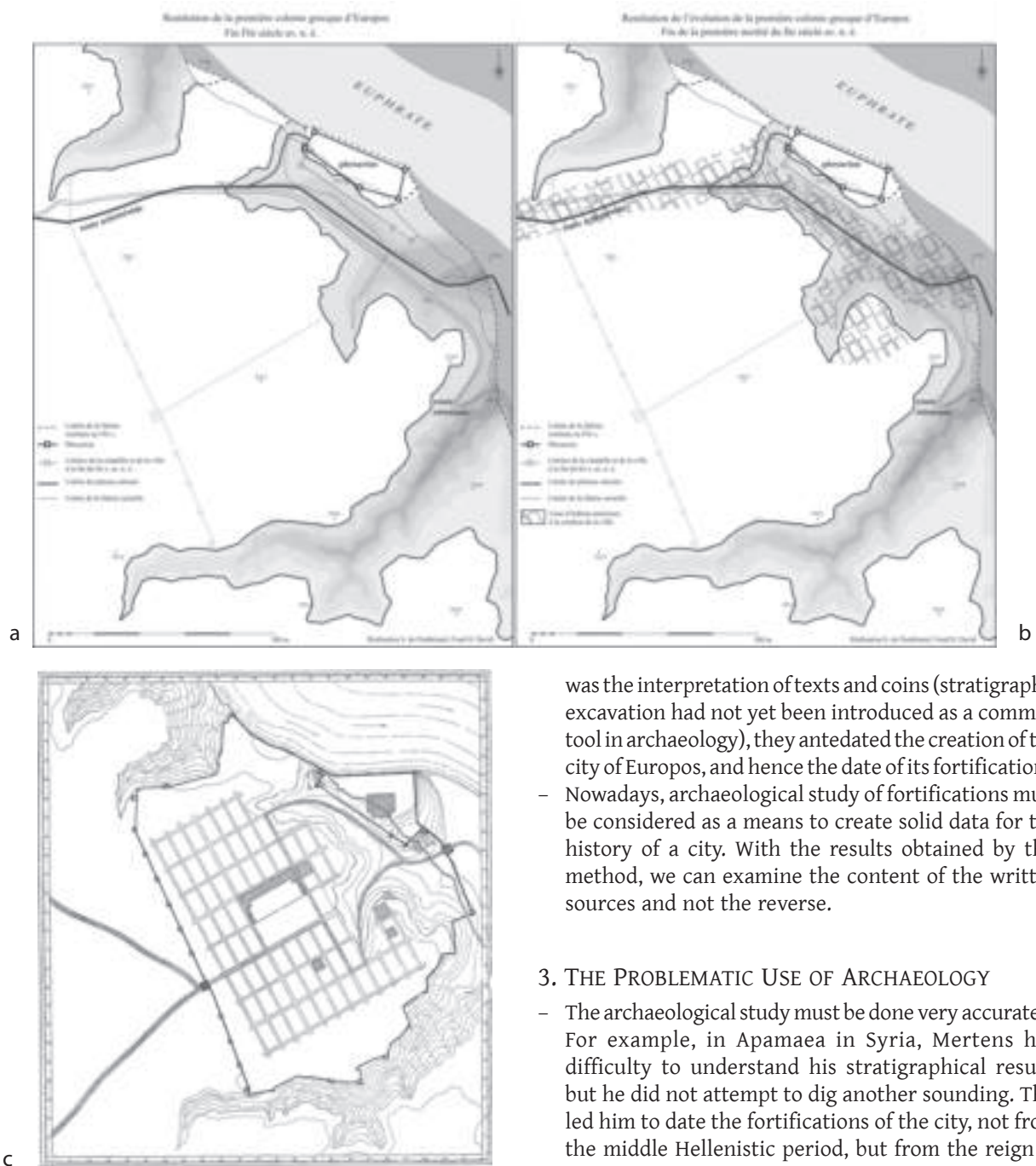


Fig. 6 Europos-Dura: New restoration of the first foundation:

- a: The original *phourion* (300 BC) along the north-south road. The western wall of the future city is indicated by a straight dashed line (S. de Pontbriand; © MFSED).
- b: One and a half centuries later, the *phourion* was the centre of a spontaneous agglomeration (S. de Pontbriand; © MFSED).
- c: Plan of the Hellenistic foundation according to the Yale University Expedition (© YUAG).

was the interpretation of texts and coins (stratigraphic excavation had not yet been introduced as a common tool in archaeology), they antedated the creation of the city of Europos, and hence the date of its fortifications.

- Nowadays, archaeological study of fortifications must be considered as a means to create solid data for the history of a city. With the results obtained by this method, we can examine the content of the written sources and not the reverse.

3. THE PROBLEMATIC USE OF ARCHAEOLOGY

- The archaeological study must be done very accurately. For example, in Apamea in Syria, Mertens had difficulty to understand his stratigraphical results but he did not attempt to dig another sounding. This led him to date the fortifications of the city, not from the middle Hellenistic period, but from the reign of Claudius.⁹
- In an excavation strategy, it is better to place the soundings along the inside face of the rampart (do not forget to indicate accurately on your drawings the inside and outside faces of the wall) to obtain a good stratigraphy; this is better than on the outside zone which has generally been disturbed by various elements like tombs (very frequent), late buildings,

⁹ Leriche 1987.

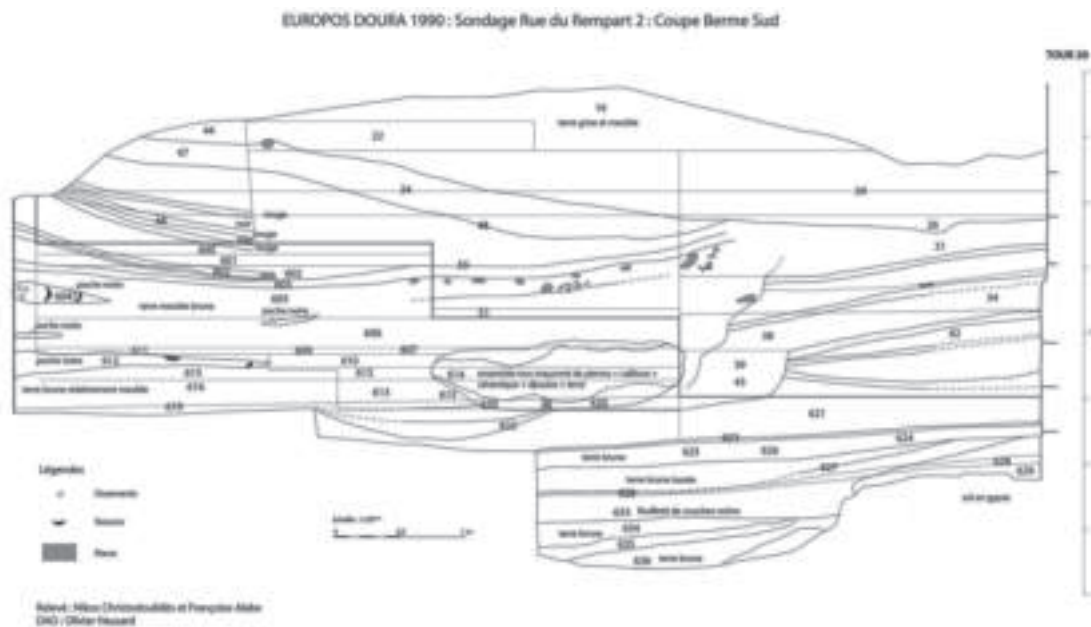


Fig. 7 Europos-Dura: Stratigraphy against the internal face of the western city wall to the right (© MFSED).

modern diggings etc. (Fig. 7). Nevertheless, remember to check the presence or absence of a moat and of *proteichisma* at some distance from the main wall, especially in the Classical period and later.

- In modern excavations, the danger is to limit the effort to stratigraphic soundings. A fortification must be evidenced on all its circuits (please do not hide the rampart under the spoils of your own excavations). However, if you are studying a mudbrick rampart, the best approach is to open up only the top of the curtain walls and towers to draw their plan, while avoiding destruction of the masonry by weather conditions.

4. MORE GENERAL ASPECTS

- The trend effects: When Mantinea and Eleusis were discovered with their mudbrick fortifications, A. von Gerkan used this model to explain the presence of a mudbrick portion in the western city wall in Europos-Dura (Fig. 8). He concluded that the mudbrick masonry was the only original part of the Hellenistic fortification of the city because the stone elevation was interpreted by him as a reconstruction by the Parthians terrified of the Roman threat. Today, we know that this mudbrick curtain had been built in a hurry by the Macedonians before the Parthian attack, in order to complete the Hellenistic stone wall under construction since half a century. This also shows



Fig. 8 Europos-Dura: Ottoman breach through the Hellenistic mudbrick wall showing the mudbrick work laid on a cut-stone base and outer gypsum masonry plating from two different Roman periods. View to the south (© MFSED).

the danger of integrating events known from the textual sources into the archaeological reality (a very common tendency in this period) in order to explain a phenomenon difficult to understand.¹⁰

- We frequently find the general idea that when the Greeks occupied a city, the fortifications were systematically of Greek type, as if the Greeks could defend themselves only behind fortifications of Greek type. During the Achaemenid Empire, Bactra and Samarkand were capitals with powerful mudbrick

¹⁰ von Gerkan 1939. *Contra*: Leriche & Al Mahmoud 1994.

ramparts. In the Hellenistic period, these fortifications were obviously reused, at least for some time, without any apparent Greek modification. It is thus better to study the structures *ex novo* (Ai-Khanoum, for example) to determine the characteristics of a Hellenistic Central Asian fortification.

- It is better to use common sense in evaluating the time required for the construction of a fortification of a city. Thus the brevity of the construction of Alexandria Eschate, built by Alexander in about 20 days, means that this foundation can only have been a modest *phourion* and not a real city.
- It is also extraordinary to see how many serious historians could believe that Alexander had founded seventy towns (Plutarch) and that Seleucos I founded numerous fortified towns (Appian), given what we know about the cost of a fortification like that of Messene!

Conclusion

Thanks to new methods of studying fortifications, the time has come to reconsider all the old data on new bases. It is evident that we cannot use information about fortifications that has been acquired through their study more than half a century ago, without serious re-evaluation. It is an ambitious undertaking but it is imperative.

Here I would like to make an important remark. In spite of our efforts in 1986, we did not observe any progress on the question of the mutual obliviousness of two worlds: the Mediterranean world which thinks entirely in terms of stone architecture, and the Eastern world of mudbrick. These two worlds continue to ignore each other, as if they did not influence mutually in their evolution. When we are working in Europos-Dura, for example, in which of these two worlds are we operating? Here is a real research field for students.

Anyway, I find here many reasons to be optimistic. First, because we are here more numerous than in the Valbonne symposium. Of course the chronological period is wider, but, on the other hand, we are more concentrated on the Mediterranean and its border, except for S. Rey, S. de Pontbriand, P. Schneider, M. Schnelle and myself, the only ones who can present impressive Eastern mudbrick military architecture. Nevertheless, we can be satisfied here by this increasing number of archaeologists and historians interested in the study of antique fortification in all its aspects. And so, in the name of all the participants, I want to thank very warmly the organizers for this important initiative.

Second, I am sure that the publication of the proceedings – “Fokus Fortifikation 2” – represents a lot of work, dear organizing colleagues, but the way you directed this affair convinces me that it will be a success which will stand out. It is worth it indeed, because this meeting has allowed us to make a general assessment of the research. However, it also represents a new stage in the development of this still young discipline. Like the young Herakles, it is already full of energy and – I am sure – it will continue to grow in vigour, providing plentiful and promising harvests of future numerous brilliant achievements.

Thank you FoFo!

Pierre Leriche

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Origins of Fortifications

INTRODUCTION

Rune Frederiksen & Mike Schnelle

Fortification has been part of urban life from the time of the first settlements of the Neolithic Revolution.¹ In the Iron Age and historical periods towns and cities continued to be surrounded by fortification walls and it was in fact only in more recent times, around 1900, when modern artillery and later warfare with aeroplanes made fortifications obsolete, that they disappeared as an omnipresent urban phenomenon of our world. Up to that point, close to every town or city had had its own fortification, existing in many phases corresponding to the major active periods in the history of the individual cities from the time of their foundation onwards.

As was stated in the call for papers of this conference we understand *origins* both in connection with early civilizations as such in our part of the world, and more specifically of the origin of fortification in ancient Greek and Roman antiquity, since this is what most of our network participants concentrate on in their specific research. 'Origins of fortification' was not one of the research areas that was systematically scrutinized by our research network, but it was clear that it was too important a topic to leave out of this conference. The call for papers therefore asked for contributions under this heading, and, as was the case with the other sessions, we received many more proposals than we were able to include; and we were able to compose a session widely spread in time and space.

We have not at any point believed that we could get together something that would get anywhere near a comprehensive treatment of the origins of fortification. What we have been able to present are eight papers spanning in time from the Early Bronze Age to around the birth of Christ, and in geography from South Arabia over Mesopotamia to Rome and Anatolia to Crete. This includes some treatment of cultures outside the ancient Greek and Roman cultures, also in accordance with the research conducted by some of the network members. The study of cross-cultural interaction is important in any major investigation of a single phenomenon, as this one on fortification, and we thus include some treatment of the more important cultures contemporary with and neighbouring the Classical Mediterranean ones.

This section both brings into focus aspects of fortification that are particularly important for those early cultures, but also offers a prelude in terms of a number of issues and categories of question which the reader will encounter over and over again in the thematic sections in the rest of this volume.

The first two papers take us to some of the earliest urban civilizations on earth, namely Mesopotamia and Syria in the Early Bronze Age. Then we jump to a treatment of the Neo-Assyrian Empire. The Neo-Assyrians are known to world history as early masters of warfare and

¹ Tracy 2000, 1. For ancient Greece: Alusik 2007; Aslanis 2008; Runnels *et al.* 2008; Simpson and Dickinson 1979, 46–7, 174. For the ancient Near East: Wright 1985, 172–215, figs. 76–122; Cooper 2006.

their universe, one might say, was very much about fortifications and siege and much of what we encounter later in history was already put on stage by the Assyrians. The chapter on Neolithic and Bronze Age Crete takes us back in time again and into the Mediterranean, and a chapter is devoted to certain aspects of fortification of the Mycenaean World – a culture which has long been known for its fortifications. The early Iron Age is represented by a paper about the fortifications of Central Anatolia, and we then jump in geography to one article about the early fortification of the city of Rome. The section is rounded up with a treatment about the fortifications of the ancient South Arabic culture that spread on both sides of the Red Sea beginning in the early Iron Age towards the end of the 1st millennium BC.

It may be a banality, but general for fortification is that it follows settlement, at least settlement of some size. Next, it is interesting to observe that fortification as a phenomenon goes back to the dawn of civilization, or to put it in more dramatic terms: the development of the civilized part of human history reveals a most uncivilized element of human character, we must say, namely a constant need to develop and maintain profound protection in the form of walls, from other humans.

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MARI AND THE DEVELOPMENT OF COMPLEX DEFENSIVE SYSTEMS IN MESOPOTAMIA AT THE DAWN OF HISTORY

Pascal Butterlin & Sébastien Rey

Abstract

This article briefly discusses the historiography and current theories on ancient fortifications, Archaic warfare and the ‘urban revolution’ and advances some general arguments that Mesopotamia’s trajectory of long-term social development and state formation was related to wars and military activity. Its principal aim is to reconstruct through an examination of the archaeological and epigraphic evidence – particularly the preliminary results of our excavations at Mari, metropolis of the Euphrates – the general sequence of the development of the earliest known complex defensive systems. If prehistoric and proto-urban fortifications frequently included baffles and bastions (active defences), we believe that the appearance of ‘multivallation’ (strategic defences) was closely linked to the emergence of complex urban-like stratified societies.

[Gilgameš] built the wall of Uruk-the-Sheepfold, of holy Eanna, the pure storehouse. See its wall which is like a stand of wool, view its parapet which nobody can replicate! Take the stairway that has been there since ancient times, and draw near to Eanna, the seat of Ištar, that no later king can replicate, nor any man. Go up on to the wall of Uruk and walk around, survey the foundation platform, inspect the brickwork! (See) if its brickwork is not kiln-fired brick, and if the Seven Sages did not lay its foundations!¹

In most early Mesopotamian town-planning-related studies, and more specifically scholarly research on the general layout of settlements in the ancient Near East, it is commonly accepted that city boundaries are most frequently defined by enceintes, either fortification walls, constructed barriers or surrounding enclosures. Well-preserved large-scale curtain remnants are conspicuous topographic features enabling assessment of the settlement area’s security or safety perimeter. These enceintes were obvious boundaries, both physical and symbolic, praised, for example, in the Gilgameš epic as emblems par excellence of the grandeur of the city of Uruk and the dignity of its tutelary goddess. The surface area of defended perimeters is often the sole indicator for determining the size of ancient settlements, once the extent of erosion has been estimated. Yet, this evaluation does not correspond to the proper built-up urban space, the assessment of which proves to be far more difficult, even after intensive fieldwork and post-survey pottery scatter analyses. It is nonetheless fairly safe to infer that although circumvallated areas often reached c. 300–400 ha

¹ George 2003, 539.

in Southern and Central Mesopotamia, they scarcely exceeded c. 80–100 ha in Northern Mesopotamia and the Levant (Fig. 1). Moreover, only a few rather remarkable large-scale political centres expanded beyond these thresholds between the late 4th and the mid-1st millennium BC – presumably Kiš, and very likely Uruk, Lagaš, Babylon and Nineveh. Of course these issues of scale are far from trivial, especially when it comes to defending these urban-like perimeters efficiently. It is also well-known that features such as defended gates and bastions (ballistic platforms) were particularly important, even magical, elements in fortifications, and objects of special devotion, as their security-related purposes were closely linked to magic and rituals in Antiquity. The naming convention for the ancient Mesopotamian capitals' city-gates in fact corresponded to their various tasks, as recorded by B. Pongratz-Leisten: politico-theological functions, topographical data (type of activity) or geographical layout of the city.²

Defensive systems in the greater Near East developed considerably over time and space, and these new advances in the art of fortifications – like other elite-related public-cultic large-scale constructions (i.e. palaces, temples, high terraces and ziggurats) – often were memorialized in commemorative royal inscriptions, epigraphic baked-bricks and other foundation deposits. Major developments of these fortification features were also accompanied by complex rites and other significant advances resulting from societal and demographic changes, as well as decisive innovations in the art of siege-craft.³ Expansions and contractions of urban-type perimeters over the course of long-term periods were extremely common phenomena both for large-scale first-tier metropolises and second-tier smaller-scaled centres, particularly in Northern and Central Mesopotamia in the 3rd millennium BC.⁴ The primary purpose of this article is to reconstruct, through an examination of the preliminary results of our excavations at Tell Hariri-Mari and the new archaeological evidence from Northern Syria (especially from Tell Chuera, perhaps ancient Abarsal), the general sequence of the development of these complex defensive systems. After a brief presentation of the history of the research on ancient fortifications, archaic warfare and the 'urban revolution', we advance some general arguments that Mesopotamia's trajectory of long-term social development and state formation was related to wars and military activity and that the development of multivallation (multiple-enclosures), i.e. strategic defences – Mari in this respect stands out as a primary locus of innovation – was closely linked to the emergence of complex, urban-like, stratified societies in Mesopotamia.

Early fortifications, archaic warfare and the urban revolution: historiography and theories

Since Childe's pioneering studies in the 1950s, it has become rather common to relate the so-called 'urban revolution' – i.e. a multiplicity and coalescence of major innovations occurred in the late 4th millennium BC in the southern part of present-day Iraq, such as the appearance of the state, of an integrated economy, the development of writing, of bronze manufacture, and the emergence of monumental art and architecture – with the construction of large-scale defensive enceintes.⁵ If it

is no longer a matter of allocating the first fortifications to this key period today, the fact remains that many, if not most, proto-urban centres of the Late Chalcolithic–Uruk period, and the first cities of the Early Dynastic–Bronze Age included complex-type defensive systems. Although the earliest known security perimeters of the Neolithic and Early Chalcolithic periods frequently included baffles and bastions, that is active defences, the appearance of multivallation – multi-layered defences composed of various and often cumulative fortification elements, such as earthen ramparts, enceintes, defended gates, firing platforms, each having a specific and complementary role – clearly was linked to the 'urban revolution'.

² Pongratz-Leisten 1994.

³ Rey 2012.

⁴ Butterlin 2009, 25–47.

⁵ Childe 1950, 3–17.



Fig. 1 Mesopotamian geopolitics before the Akkadian conquest (author's map).

The evidence from the Pre-Pottery Neolithic Tell es-Sultan-Jericho in the Levant (c. 8000–6000 BC) – the earliest known defended ditch backed by massive rock enceinte almost 6 m high and a (later) large-scale circular tower-like inner structure at least 8 m high – and Tell es-Sawwan in Mesopotamia, featuring a 3 metre-deep enclosure moat backed by mud-brick curtain, reinforced by projecting bastion-like structures and pierced by a bent-axis defended gate in the 6th millennium BC, clearly indicates that prehistoric sedentary food-producing societies – the first agriculturalists – were able to find the means to protect their settlements against predatory foes. Yet, it is very likely that these primitive aggressors, at least up to the early 4th millennium BC, remained well-organized raiders, whose primary aim was not to capture and destroy but plunder on a regular and rather parasitic

basis stored produce. Thus, prehistoric enceintes, even if some of them were reinforced by projecting towers or buttress-like abutting structures – it should be noted that the so-called watch-tower of Jericho is very poorly sited for defence, i.e. behind the wall – were not proper fortification systems, but security barrier-type enclosures, only designed to repel low-intensity threats. Recent studies conducted by C. Reichel and A. McMahon in Northern Mesopotamia, particularly at Tell Hamoukar and Tell Brak, shed new light on such threats.⁶ Organized violence clearly becomes a widespread phenomenon in the Late Chalcolithic 3 period, c. 3700 BC. Hamoukar, for example, developed into a strong, fortified proto-urban centre, and greater Mesopotamia, in general, witnessed several decisive advances in the art of warfare, closely linked to the state formation process.

⁶ Reichel 2006, 1–11 and McMahon, Sołtysiak & Weber 2011, 201–20.

Proto-urban societies progressively evolved between c. 3700 and 3100 BC into warring-like political entities. The fortifications of both Cheikh Hassan and Habuba Kabira included different complex-type features derived from long-term advancements in their construction and function. Habuba Kabira's defences comprised a main curtain wall and a second, probably low, outer line of walling – i.e. the earliest known *proteichisma*. The so-called 'Uruk expansion', perhaps driven by demographic crises and unrest in Southern Mesopotamia, clearly had a politico-military dimension: wide-scale destruction recently identified at several sites in Northern Mesopotamia has been related to sporadic manoeuvres, possibly led by Urukian settlers from their economic-defensive outposts. The stronghold of Tell Mashnaqa in the Late Uruk period may have been constructed to prevent access to Brak from the south along the Khabur River.⁷ However, these Northern Mesopotamian fortification features of the late 4th millennium BC, such as curtain and low outwork walls, even if many of them clearly grew larger and stronger over the course of the Late Chalcolithic 5 period, remained fairly small-scale, ranging from c. 2 to 3 metres in width and circumvallating densely built-up proto-urban areas of only a few hectares (20 ha at the most for the colonial town of Habuba Kabira). The emergence of larger-scaled multi-layered defensive systems in the early 3rd millennium BC, thus, may be considered as one of the major aspects of the 'urban revolution'.

The development of these staggered-like fortification systems is ordinarily related to that of the so-called Kranzhügel-type cities of Northern Mesopotamia. Yet, important scale differences between even the largest among these wreath-shaped sites of c. 80–100 ha and other well-known double-walled cities, like Tell Hariri-Mari (originally c. 150–200 ha), must be emphasized once again. Moreover, it should be noted that these sub-circular configurations of urban layouts composed of a double line of walling appear not to have developed immediately in the remainder of greater Mesopotamia: the Land of Sumer witnessed different trajectories and urban dynamics from the Late Uruk period; yet, preconceived defensive systems probably emerged in Southern Mesopotamia only in the course of the 3rd millennium BC (Early Dynastic-Akkad-Ur III periods) and only a few sub-circular urban defences have been reported (e.g. Ur). In the remainder of Mesopotamia, the development of large-scale double-walled cities from the Early Bronze Age included massive concentric rings of defensive earthworks and constructions. Naram-Sîn of Akkad's famous royal inscription commemorating the destruction of the city of Armanum in Northern Mesopotamia is the earliest known epigraphic document providing unequivocal data relating specifically to these urban-type morphologic configurations (Fig. 2).⁸ Armanum – either the present-day Bazi-Banat complex⁹ or modern Samsat¹⁰ – included multiple lines of fortification, from the Quay enceinte to the Citadel

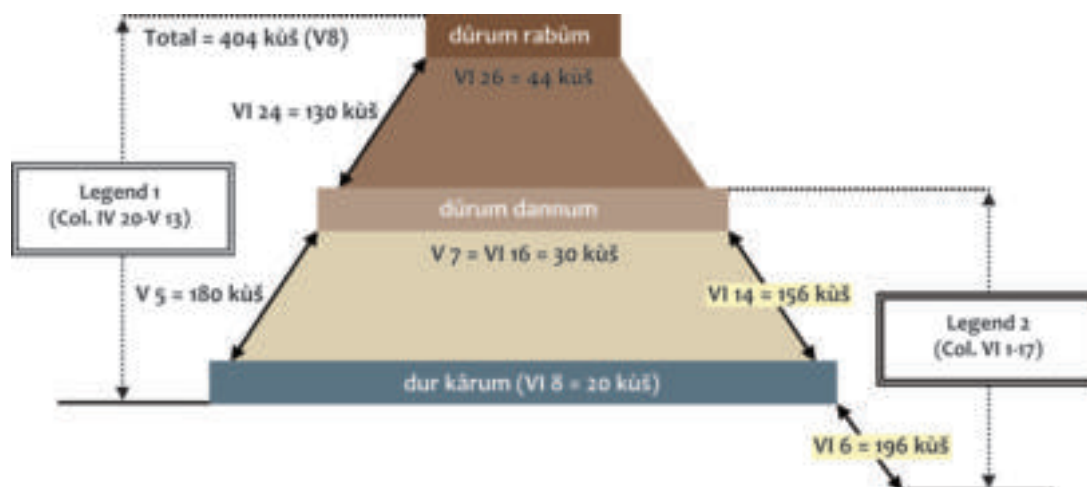


Fig. 2 Multiple-enclosures of the city of Armanum (after Foster 1982, 35).

⁷ Butterlin 2003.

⁸ Frayne 1993, 132–5.

⁹ Otto 2006, 1–43.

¹⁰ Archi in press.

enceinte and the Palace defended gate where the king of the city was defeated. Staggered and layered (sub-circular) defences, thus, clearly were major features of the first urban-type topologic landscapes in Northern and Central Mesopotamia. Multivallation itself, of course, may have been devised as a means of segregation, functional or hierarchical. Hence, our primary focus in the remainder of this paper is on the modalities of the evolution of these complex fortification systems.

Multivallation, state formation and alternative urbanization trajectories in Mesopotamia

It is a well-acknowledged fact today that the development of the so-called Round cities should be considered as

one of the most characteristic Mesopotamian patterns of state formation and urbanization trajectories at the turn of the 4th and the 3rd millennium BC. Following the pioneering studies of J.-C. Margueron, Mari (modern Tell Hariri) has long been considered as the earliest known circular-shaped metropolis in Mesopotamia (Fig. 3).¹¹ Today, the site, situated on the right bank of the Euphrates River, is a c. 100 ha complex of mounds: the main tell (upper mound) covers an area of c. 40 ha; the lower town is surrounded by a south-eastern concentric levee. Excavations from 1933 to 2010 led to the identification of three main periods of occupation: Mari I (c. 2900–2650), Mari II of the Early Dynastic period (c. 2600–2300) and Mari III of the Šakkanakku and Lîm dynasties (c. 2300–1750). According to morphologic studies and stratigraphic step trenches on the northern and eastern edges of the main mound, the topography of the present-day site is the result of massive flooding



Fig. 3 Multivallate-rings of Tell Hariri-Mari (Mission archéologique française de Mari).

¹¹ Margueron 2004.

and erosion.¹² Hence, Mari I would have been originally a c. 150–200 ha double-walled city, including two separate lines of defence, the inner perimeter made of heavy stone foundations with superstructures of mud-brick enclosing the upper town – i.e. the proper urban-type space of combined pre-planned political-religious nuclei and densely occupied plebeian-like areas – and a second, outer earthen embankment or dyke-like structure surrounding the lower town, and made of layers of clay, broken mud-bricks, and other types of earth and soils, measuring 8 m in width, and featuring a 2 metre-wide stone core-wall – probably the foundation of a proper enceinte. This particular configuration of a double line of walling circumvallating the upper city – the so-called Amorite *kirhum* of the old-Babylonian epigraphic documents – and the lower city (the *adaššum*) occurs in the Mari royal archives of the early 2nd millennium BC.¹³

Yet, recent discoveries in Northern Mesopotamia at Tell Chuera, maybe ancient Abarsal, and Tell Beydar, ancient Nabada, but also at Mari itself, after the renewed exploration of the fortification in the East city, have prompted debate on the validity and relevance of the above-mentioned scenario that the latter site may be

considered as the non-ambiguous precursor of the Round cities.¹⁴ Preliminary results of the latest fieldwork conducted by J.-W. Meyer at Tell Chuera led to the identification of a pre-Kranzhügel phase dating to c. 3100 BC, i.e. immediately after the abandonment of the Urukian Euphrates colonies, or at least at a time close to this abandonment (Fig. 4). In any event, the foundation of Chuera (THC IA) clearly predates the construction of the earliest Mari I remains. Yet, this early settlement (proto-Kranzhügel) of sub-circular layout did not include two separate lines of defence. Only the main mound (the later upper town), covering an area of c. 50 ha, was inhabited and enclosed by a massive 4 metre-wide mud-brick enceinte. In fact, Chuera developed into a proper double-walled city of c. 90 ha only in the subsequent phase (THC IB). But shortly after the construction of the outer fortifications – an inset-outset bastioned 5 metre-wide mud-brick curtain wall and earthworks (rampart and glacis) – the inner enceinte fell out of use and was incorporated into adjacent domestic-type structures. One of the major preliminary conclusions of these recent finds is that, except of course for the immediate and transitional outer defences' post-construction phase, c. 2600 BC, Chuera never included inner and outer contemporaneous lines of fortification: the multivallate-rings, therefore, were the product of cumulative episodes of construction. Recent re-evaluation of the development of the defensive system of Tell Beydar–Nabada by M. Lebeau also led to a rather comparable conclusion, though in this case the reverse process occurred, since the outer enceinte appears to have been erected first and then abandoned. Nevertheless, it can be stated that the multivallation phenomenon clearly was not Kranzhügel-related.

As to Tell Hariri-Mari, preliminary results of our recent field-studies on the inner fortifications from 2006 to 2010 (operations N3, N4 and N5, situated along the south-eastern side of the upper town)¹⁵ also led to the reassessment of the general sequence of the development of the entire defensive system, particularly of the earliest phases between c. 2900 and 2600 BC. Excavations in area N4, an L-shaped stratigraphic trench situated on the inner mounded ring – 30 m in length, 5 m in width in its northern part (at the crest of the mounded ring), and 10 m in width in its southern part (along the base of the ring's outer slope) – revealed a complete cross-section

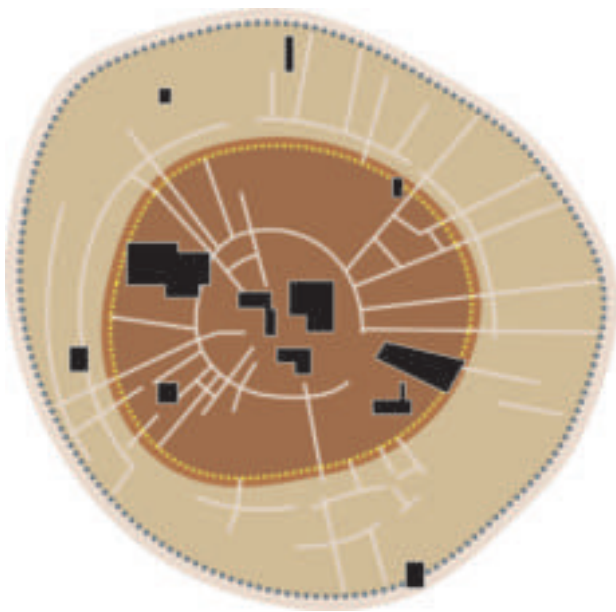


Fig. 4 Development of the complex defensive system of Tell Chuera (after Meyer in press).

¹² Butterlin 2011, 171–229.

¹³ Durand 1998.

¹⁴ Meyer in press and Lebeau 2005.

¹⁵ See Butterlin 2007, 2008, 2010 and Rey in press.



Mari I (ca. 2900-2650) From West



Mari II (ca. 2600-2300) From South

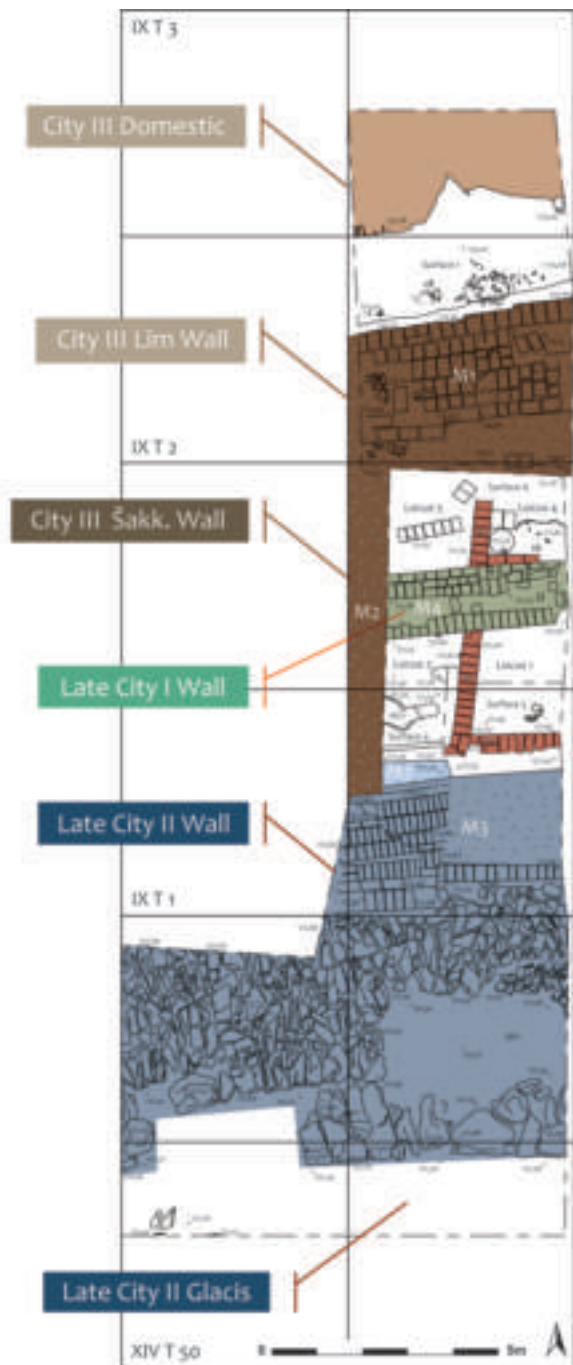


Fig. 5 Inner fortifications of Mari, Operation N4 (Mission archéologique française de Mari).

of the inner fortification system, from the modern surface down to bedrock (Fig. 5). A deep sounding in the central part of the trench, abutting the probable Mari II northern enceinte's façade, and just below the massive Mari III Šakkanakku foundations' earthworks, revealed a

thick destruction layer composed of broken mud-bricks, detritus and other types of earth and ashy soils, as well as mid- to late 3rd-millennium BC diagnostic pottery. This layer sealed a sloping surface made of gypsum chips, which completely concealed earlier and well-preserved,

yet levelled, and totally unsuspected architectural remains of Mari I. A 1.40 metre-wide truncated mud-brick barrier-like enceinte was exposed on top of earlier domestic-type remnants deposited on a thick layer made of alternating layers of varying types of fills directly laid out above bedrock.

This important find led to the following and likely hypothesis that the first large-scale inner fortifications made of massive stone foundations with superstructures of mud-brick were not constructed in the course of the Mari I period (c. 2900–2650 BC), but coincided with the re-foundation of the Mari II Early Dynastic city, c. 2600 BC. In fact no less than two main phases of construction of this 7 metre-wide enceinte, uncovered in the southern half of the trench and featuring (later) exterior 2 metre-deep projecting buttress-like structures, have been posited. Excavations in area N5, situated along the base of the inner mounded ring's outer slope, bordering the main southern wadi-like ravine of the East city and in alignment with the Early Dynastic bastioned curtain wall, that is, c. 20 m to the east of operation N4, also revealed the remains of a Mari II defended gate. This was dubbed Gate of Kiš owing to the fact it lay along the south-eastern side of the site in front of the major Southern route to Central Mesopotamia. Only the western part of this fortification feature was well preserved. It consisted of heavy stone and mud-brick composite foundations with a superstructure of mud-brick. The exterior façade was reinforced by several large unhewn blocks of gypsum completely sunk into the mud-brick superstructure, probably designed as an obstacle to breaching. Also, it was fronted by a tower-like salient buttress, 2 m wide and 11.50 m long. The eastern part extending into the adjacent topographic break was heavily eroded. Yet, a c. 4.60 metre-wide direct-axis entrance has been posited on the basis of a few *in situ* large slabs of stone – that is, of equal-width to the city's main streets, particularly of the *via sacra* exposed in the religious precinct along the Massif rouge. The Mari II Gate of Kiš appears therefore as a simple structure merely overlapping the inner curtain defences to form a straight and buttress-flanked passageway featuring two central piers.

Remains of Mari III fortifications have been exposed in the northern half of the N4 stratigraphic trench and in area N3, situated c. 60 m to the west of the latter at the projecting mound-like massive structure of sub-quadrangular layout, abutting the inner line of defence, and more or less equidistant from the two main breaks of the East city. In operation N4, two main phases of construction have been identified: an early phase

enceinte protected by a talus-like glacis probably of the Early Šakkanakku period, followed by a later phase, perhaps Late Šakkanakku, or more likely Lîm period. The early curtain wall, c. 7.50 m wide, consisted of a mud-brick superstructure set on massive foundations composed, as indicated above, of thick layers of earth, packed clay and heterogeneous courses of piled-up mud-bricks. It was fronted by a glacis characterized by thick, sloping layers of earth, thrown up against the exterior face of the curtain. In the following phase, the latter was reinforced by the addition of a new 3 metre-wide mud-brick interior façade. This phase, if of the Lîm period, would correspond to other developments of the inner line of defence, such as the construction in area N3 of the Southern Bastion. Of this large-scale firing platform only the southern façade was partially destroyed. Solely made from large square mud-bricks it measured c. 20 m wide and at least 22 m long, and thus would have covered an area of c. 450 m². It included a monumental staircase probably of six flights and a central square core. The latter was set in the southern part of the bastion's mud-brick superstructure only preserved in a few courses; the foundations, however, were over 1.50 m in thickness. The central core of 6.50 m side square layout rested on a composite casemate-like base of varying types of fills (pebbles, gravel, earth, etc.). Only the first series of steps made of baked mud-bricks have been exposed. They probably led from a corridor-type passageway accessible from an open square situated to the north of the bastion to the battlements' defences, conceivably c. 12 m above. Several deep soundings, including one along the northern façade revealing diagnostic Lîm-type sepultures buried in the edifice's massive foundation layer, thus providing a perfect *terminus ante quem*, have ascertained that it was constructed in the late Mari III period.

Having completed our brief presentation of the 2006–2010 operations in the East city, it is possible to draw some general conclusions about the development of multivallation and the fortification system of Tell Hariri-Mari in the 3rd and the early 2nd millennium BC.

Mari I, founded in the 29th century BC, was enclosed by an outer proto-earthen rampart or dyke-like embankment – the probable sub-structure of a barrier-type wall (Fig. 6). Although we lack wide-scale unequivocal remains of the earliest inner defensive features, we can infer on the basis of the N4 stratigraphic trench that the first 1.40 metre-wide mud-brick inner barrier-enceinte, circumvallating the densely built-up space, was constructed in the course of this period, set directly on top of the remnants of earlier domestic-like structures. Hence, Mari I appears

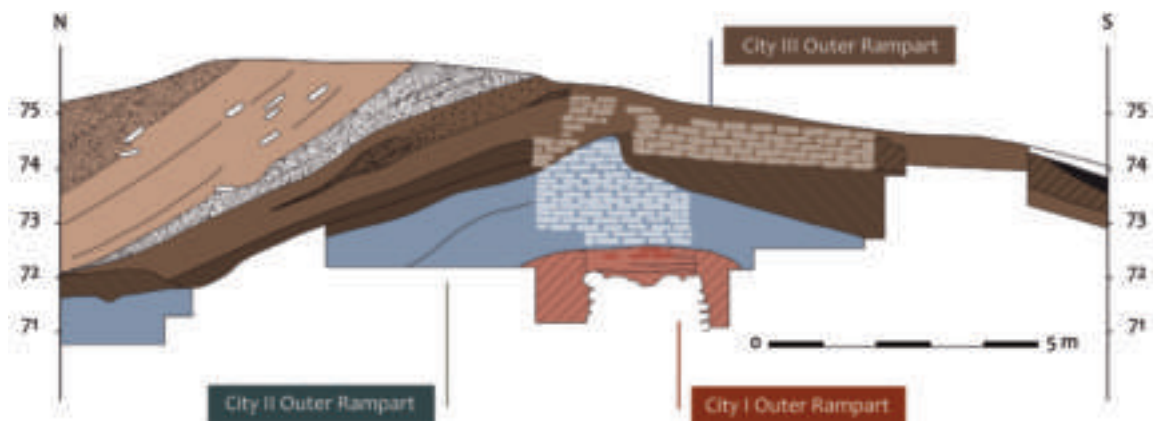


Fig. 6 Outer fortifications of Mari, Operation C5 (Mission archéologique française de Mari).

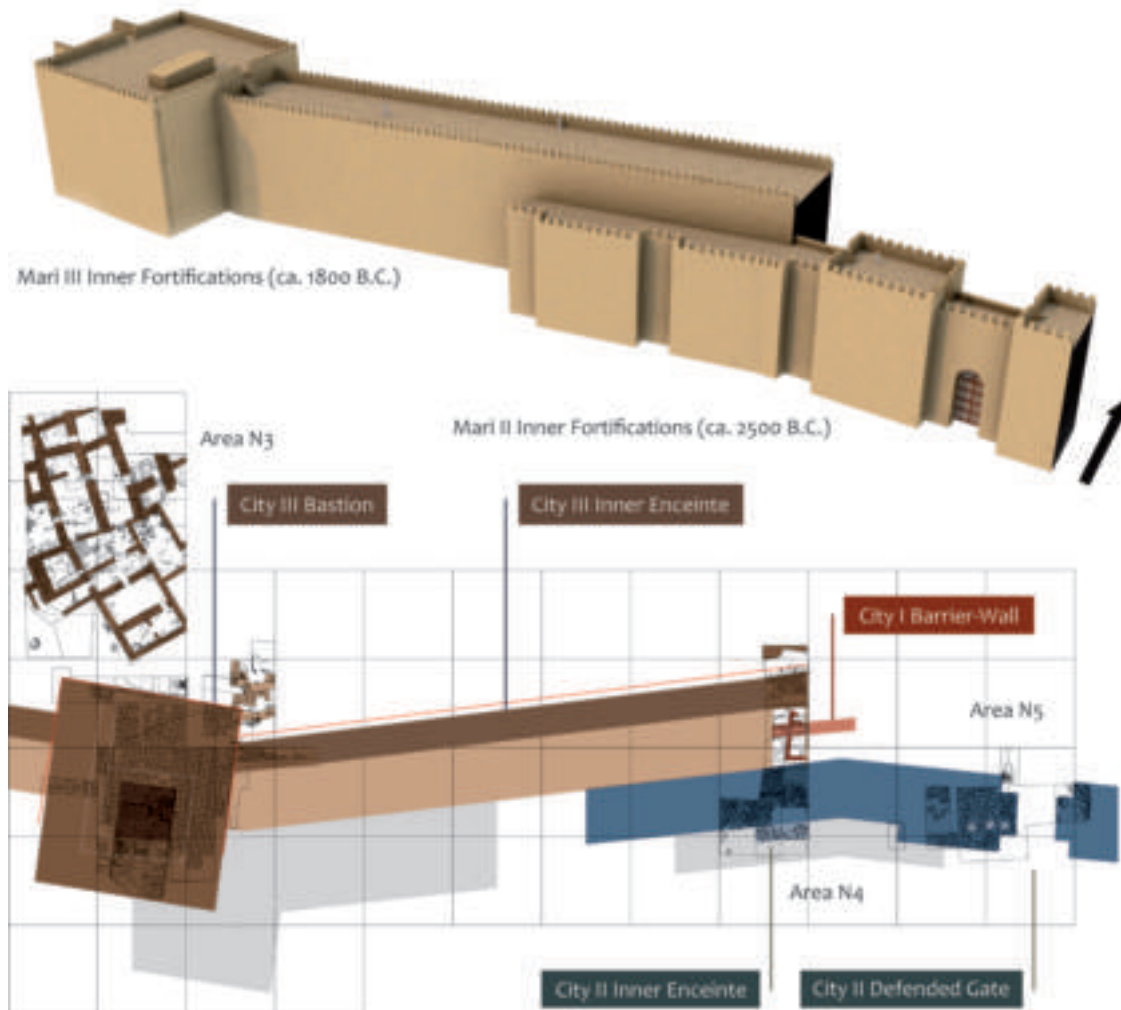


Fig. 7 Reconstruction of the defences of Mari (Mission archéologique française de Mari & artefacts-berlin.de).

as a characteristic proto-urban-type centre, including thereby an extended security perimeter (dyke and screen-enclosure), that developed into a proper double-walled city.

After a period of abandonment, Mari II was re-founded in the 26th century BC on the levelled remains of the previous city. The configuration of a double line of walling was preserved, yet the inner defences were considerably enlarged to form the main large-scale fortification system – a first 7 metre-wide mud-brick enceinte set on massive stone foundations protected by a talus-like glacis, followed by a second mud-brick curtain, including projecting buttresses, also made of mud-bricks on heavy stone foundations, and featuring, in front of the main Southern artery leading to Babylonia, a simple-type defended gate (Fig. 7). If the outer mounded ring also was rebuilt and surmounted by a 2 metre-wide mud-brick enceinte with inner buttresses, it nonetheless retained its passive-like safety-related function. Yet, building activities of this scale and complexity clearly should be evaluated as a whole as a manifestation of early state formation: multivallation, as has been suggested, may have been a measure of status and political power.

After the destruction of Mari II by Akkad in the 24th century BC, and a subsequent period of uncertainty, Mari III of the Šakkanakku dynasty was re-constructed on the razed ruins of the Early Dynastic city. Although the evidence of inner fortification features is very incomplete, it is likely, however, as mentioned above, that the early Mari III phase, characterized by a 7.50 metre-wide mud-brick enceinte, corresponded in fact to the first sub-phase Early Šakkanakku of the outer defences' chronological sequence. In the early sub-phase, a 2.4 metre-wide mud-brick defensive wall featuring both interior and exterior one-metre salient buttresses was added to the pre-existing earthen rampart; in the late sub-phase, the embankment's surface was expanded on both sides and new buttressed inner and outer façade walls were added to the pre-existing mud-brick enceinte resulting in a total width of 7 metres.

Mari III of the Lîm dynasty underwent important changes in the defensive system of both the upper town – *kirhum* and the lower town – *adaššum*. The construction of the earthen rampart's massive inner glacis coincided with the reinforcement of the inner defences, including the construction of a large-scale c. 450 m² bastion, and the enlargement of the previous curtain by addition of a 3 metre-wide new inner façade, resulting in a total width of 10.50 metres. These considerable developments of the site's defences in the late Amorite period may have been the work of the king Yahdun-Lîm who boasts in a famous royal inscription of having – like Gilgameš before him – reconstructed the fortifications of his city: 'I built the wall of Mari and dug its moat'.¹⁶ Monumental defensive elements indeed have long been extremely powerful symbols of possession and independence: clearly, they were impregnated with a royal propagandistic content. Yet, the reconstruction of such defensive features also occurs in a year-name of Yahdun-Lîm.¹⁷ Moreover, several non-official epistolary documents suggest that the Mari III-*kirhum* was enclosed by the 'Great enceinte' (*bàd^{ki} gal, dûrum rabûm*), and the *adaššum*, by the 'Middle enceinte' (*dûrum qablûm*).¹⁸ If the construction of complex fortification systems served as a vehicle to enhance politico-social cohesion within these early warring kingdoms and to reinforce the kings' status, their destruction – also recorded, albeit in a laconic way, in many official documents – may be considered, through a dialectal process, as an allegorical expression of unification. The final outcome of Mari, thus, is crudely depicted in a royal inscription, in which the king of Babylon, after his military triumph, claims to have completely razed its defences and turned the Land of Mari into ruins and tells. Hammu-rabi's 35th year-name recalls: 'the year king Hammu-rabi, on the order of (the gods) An and Enlil, destroyed the (Great) city wall of Mari'.¹⁹ If Mari today should hardly be considered as the proto-type of the Round cities, it is nonetheless possible to infer that it is at present one of the earliest known precursors of the Mesopotamian double-walled cities, and therefore a locus of innovation of deliberate multivallation for the purpose of defence.

¹⁶ Frayne 1990, 602–4.

¹⁷ Charpin & Ziegler 2003, 63.

¹⁸ Ziegler 1994, 11–12.

¹⁹ Charpin & Ziegler 2003, 244.

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MESOPOTAMIAN POLIORCETICS BEFORE ASSYRIA: GENESIS OF THE ART OF FORTIFICATION AND SIEGE WARFARE

Sébastien Rey

Abstract

This article's primary purpose is to present a general overview of the Early Mesopotamian art of fortification and siege warfare and to counter a long-standing tendency of military historians and archaeologists to consider that complex defensive systems and siege-craft machinery such as chariot-like battering-rams originated in the Late Assyrian period. Hence, we argue that Mesopotamia of the first warring kingdoms (Mari, Ebla, Lagaš, Uruk, Akkad), witnessed the emergence of poliorcetics. Our first focus is on various categories of fortification features such as enceintes, earthen ramparts, ballistic platforms and defended gates. Several typologies of these fundamental elements are advanced and we discuss briefly the impact of the development of siege-craft on the evolution of fortification systems.

Sargon, king of Agade, bailiff of the goddess Aštar, king of the world, anointed priest of the god An, lord of the land, governor for the god Enlil, conquered the city of Uruk and destroyed its walls. He was victorious over Uruk in battle, conquered the city, captured Lugal-zage-si, king of Uruk, in battle and led him off to the gate of the god Enlil in a neck stock. Sargon, king of Agade, was victorious over Ur in battle, conquered the city and destroyed its wall. He conquered Eninmar, destroyed its walls, and conquered its district and Lagaš as far as the sea. He washed his weapons in the sea. He was victorious over Umma in battle, conquered the city, and destroyed its walls. To Sargon, lord of the land the god Enlil gave no rival. The god Enlil gave to him the Upper Sea and the Lower Sea, so that from the Lower Sea to the Upper Sea, citizens of Agade held the governorship of the land. Mari and Elam stood in obedience before Sargon, lord of the land.¹

Most scholarly research seeking to address ancient fortifications and siege warfare in Antiquity lacks a comprehensive review of early Mesopotamian poliorcetics – that is, the art of fortifying and storming cities – before the Neo-Assyrian empire. Yet the 3rd millennium BC was an important period in the history of siege-craft and urban defences. Mesopotamia and the Levant witnessed several decisive advances: the appearance of siege engines, the emergence of standing armies, the first assault troops in close phalanx-type formation, and the development of complex defensive systems. Such major innovations clearly

¹ Frayne 1993, 10–12.

resulted from the formation of the first warring kingdoms² (Mari, Ebla, Kiš, Ur, Uruk) and by c. 2350 BC of the predatory state of Akkad (Fig. 1).³ Sargon's relentless conquest, as recorded in numerous royal inscriptions, undoubtedly perpetuates, in term of ideology, both a policy of universal dominance and supreme control, already partially implemented by Lugal-zage-si of Uruk, and a policy of terrorization, forced relocation and mass decollation, probably initiated at Ebla a century earlier, and that is reflected in a unique epigraphic document, the letter of the king Enna-Dagan of Mari – the first enumeration of trophy-cities punctuated by a macabre-like recursive formula: 'he left mounds (tumuli) of corpses'.⁴ After Sargon of Agade and systematically in the course of the remainder of Mesopotamian history, the ideology of urban conquest to which the wide-scale razing of fortifications is the evident manifestation stands as a clear expression of this early policy of terror.⁵ The primary purpose of this article is to trace through an examination of the archaeological and epigraphic evidence the origins of Mesopotamian poliorcetics and state that many, if not most, 1st-millennium BC complex defensive systems composed of fortification features such as enceintes, earthen ramparts, ballistic platforms and defended gates, as well as military siege techniques, either blockades or assaults, often considered as Late Assyrian innovations, had clear antecedents in the Early Mesopotamian period.



Fig. 1 Distribution of Early Mesopotamian fortified sites (S. Rey).

² Archi & Biga 2003, 1–44.

³ Sallaberger 2007, 417–56.

⁴ Fronzaroli 2003, 35–42.

⁵ Rey 2012.

Enceintes

Enceintes by definition are the main elements of complex defensive systems. The earliest known Mesopotamian fortification or curtain walls of the 3rd millennium BC can be traced back to the Jemdet Nasr and EBEB I periods (c. 3100–2900 BC). Although the evidence is very incomplete in both Central and Southern Mesopotamia, a few stretches of Jemdet Nasr city walls have been reported at Tell Asmar, Khafajah, Warka-Uruk and Abu Salabikh.⁶ They appear to have been built solely of rectangular or plano-convex mud-bricks, and were of varying thickness, ranging from 4 to 15 metres. In Northern Mesopotamia, particularly the Jezirah, EB I curtains have been investigated at Tell Chuera (perhaps ancient Abarsal?)⁷ and at several stronghold-like sites of the Upper Khabur (e.g. Tell Bderi, Tell 'Atij, Tell Rad Shaqrah, Tell Kerma).⁸ Ordinarily they were built exclusively from mud-brick except at Tell Rad Shaqrah and Tell Kerma where both enceintes were made from mud-brick and stone.⁹ The average width of these curtains was c. 3.5 metres.

Mesopotamian fortification walls clearly grew larger and stronger over the course of the Early Dynastic I–III and EB II–III periods. Many, if not most, of these enceintes also were fronted by ditches or fosses. The average width of these curtains was c. 4.5 metres. Many of them constructed between 2900 and 2300 BC consisted of heavy stone foundations with superstructures of mud-brick (e.g. Tell Hariri-Mari, Tell Ashara-Terqa, Tell el-'Abd, Tell Habuba Kabira, Tell Halawa, Jerablus Tahtani).¹⁰ Some of them featured inner and/or outer projecting buttresses (e.g. Tell Hariri-Mari, Khafajah, Tell Chuera, Tell Habuba Kabira, Tell Bi'a-Tuttul). Accompanying many enceintes were glacis or defensive talus, which are characterized by thick, sloping layers of gravel, packed clay and earth, thrown up against the exterior face of curtains (e.g. Tell Hariri-Mari, Tell Ashara-Terqa, Tell Bderi, Tell Beydar-Nabada, Tell Chuera, Tell Rad Shaqrah, Tell Mozan-Urkeš, Tell Halawa, Jerablus Tahtani, Tell Bi'a-Tuttul).

The earliest known casemate-type systems – that is, two parallel walls with compartmentalized spaces in between – were found at Tell Munbaqa and Tell Rad Shaqrah between 2600 and 2300 BC.¹¹ Both curtains of Tell Bi'a-Tuttul and Tell Ashara-Terqa also featured a second, probably low, outer line of walling.¹²

Solid defensive curtains continued to be constructed throughout the remainder of the 3rd millennium BC. The average width of Akkad-Ur III and Early Bronze IV A–B enceintes remained c. 4.5 metres. Most of them were constructed between 2300 and 2000 BC with mud-brick superstructures and stone foundations (e.g. Tell Taya, Kuyunjik-Niniveh, Tell Habuba Kabira, Tell Kannas, Tell es-Selenkahiye, Tell es-Sweyhat, El-Rawda),¹³ except at Tell Munbaqa where the curtain wall was made solely from stone.¹⁴ Many of these enceintes also were accompanied by defensive talus-like glacis (e.g. Tell Hariri-Mari, Tell Taya, Tell Halawa, Tell Kannas, Tell es-Selenkahiye). At Tell Habuba Kabira, the curtain wall featured inner projecting buttresses.¹⁵ Casemate-like walls have been reported both at Tell Taya and Tell Abou Danné.¹⁶

Earthen ramparts

Earthen ramparts are artificial levees piled up around sites as independent or non-independent fortification elements of complex defensive systems (Fig. 2). Only a few Mesopotamian earthwork defences of the 3rd millennium BC have been recorded and excavated. The earliest known earthen embankment or dyke-like structure was found at Tell Hariri-Mari dating to between 2900 and 2800 BC (Mari I).¹⁷ It was made of layers of clay, broken mud-bricks, and other types of earth and soils, measured 8 metres in width, and featured a 2 metre-wide stone core-wall – probably the foundation of a proper defensive enceinte. This outer mounded ring was rebuilt and considerably enlarged in the Early Dynastic period, c. 2600 BC (Mari II). It was

⁶ Rey 2012 and references therein.

⁷ Meyer in press.

⁸ Rey 2012 and references therein.

⁹ Bielinski 1992, 77–85; Fortin 1991, 5–15; Saghih 1991, 171–84.

¹⁰ Rey 2012 and references therein.

¹¹ Werner 1998; Bielinski 1992, 77–85.

¹² Miglus & Strommenger 2002; Buccellati 1979.

¹³ Rey 2012 and references therein.

¹⁴ Werner 1998.

¹⁵ Heusch 1979, 159–99.

¹⁶ Reade 1982, 72–8; Tefnin 1983, 141–52.

¹⁷ Margueron 2004; Rey 2012.

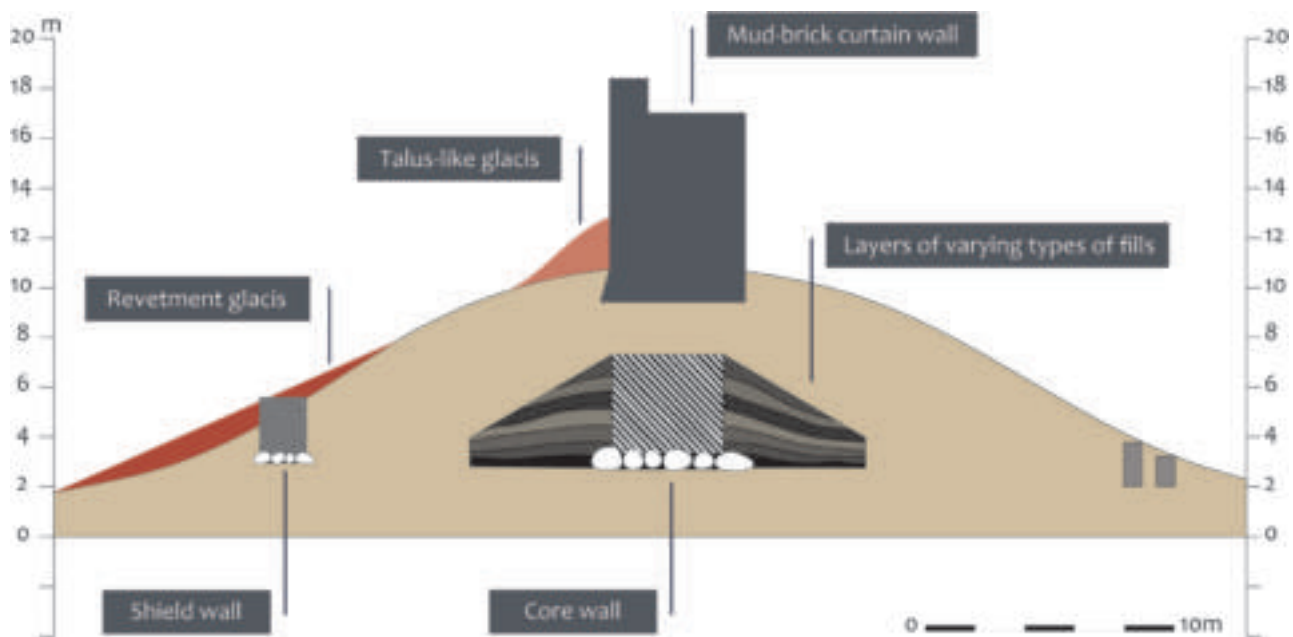


Fig. 2 Schematic cross-section of Early Mesopotamian earthen rampart (after Rey 2012, 89, fig. 55).

surmounted by a 2 metre-wide mud-brick enceinte with inner buttresses. The Šakkanakku and Lîm periods (Mari III) provide the best evidence for the development of the outer fortifications: in the first sub-phase (c. 2200 BC), a 2.4 metre-wide mud-brick defensive wall featuring both interior and exterior one-metre salient buttresses was added to the pre-existing earthen rampart; in the second sub-phase (c. 2100 BC), the embankment's surface was expanded on both sides and new buttressed inner and outer façade walls were added to the pre-existing mud-brick enceinte resulting in a total width of 7 metres; the final sub-phase (c. 1900 BC) was characterized by massive expansion of the inner slope reinforced by a revetment-like glacis made of gravel.

At Tell Leilan (ancient Šeḫna), between 2300 and 2100 BC, a 10 metre-wide irregular-shaped earthen rampart enclosed the lower town.¹⁸ Like Tell Leilan, the defensive rampart at Tell es-Sweyhat was probably constructed in the EB IV A period (c. 2300 BC).¹⁹ This outer fortification consisted of a massive levee made of alternating layers of gravel and clay packing, approximately 18.5 metres in width, that had been faced on the outside with a sloping stone revetment glacis, and was supported on the inside

by a c. one metre-wide retaining mud-brick wall set on stone foundations. The construction of Umm el-Marra's sub-circular defensive embankment also dates to the EB IV A period.²⁰ Composed of various types of soils and alternating layers of ash, it measured approximately 25 metres in width and featured an outer glacis of earth supported by a 1.6 metre-wide stone revetment-wall. In the EB IV B period (c. 2100 BC), a new glacis composed of limestone chips and pebbles and held in place by a massive 5.3 metre-wide stone shield-wall was added outside the previous exterior glacis. If only a few 3rd-millennium BC earthen ramparts have been excavated, it is likely, however, that other contemporary sites also featured such defensive earthworks (e.g. Jerablus-Carchemiš, Tell Mozan-Urkeš, Tilbešar).

Ballistic platforms

Ballistic platforms are the main dynamic elements of complex defensive systems. Their purpose is to inflict flanking and suppressing fire. The distinction between projecting towers and bastions is essentially based

¹⁸ Ristvet 2007, 198–204.

¹⁹ Zettler 1997.

²⁰ Schwartz *et al.* 2000, 419–62.

on two empirical criteria: the size with a threshold of c. 100 m² and/or the ratio between the length and the width with a threshold of approximately 2 to 1. Thus, towers cover a maximum area of 100 m² and usually have a more or less square or semi-circular plan, while bastions are larger and more complex fortress-like structures, either hemi-circular or with a clear elongated layout having thereby a length roughly equal to twice the width. Mesopotamian firing platforms constructed throughout the 3rd millennium BC in fact were c. 35 m² area average salient towers (e.g. Tell Agrab, Tel Ashara-Terqa, Tell Halawa, Jerablus Tahtani, Tell es-Sweyhat, Tell es-Selenkahiye, El-Rawda).²¹ Only at Tell Kannas, in the EB IV A period (c. 2200 BC), has a bastion-like hemi-circular 150 m² abutting structure been reported.²² Also, the spacing between ballistic platforms was highly variable but not random, and to some degree predictable, ranging from c. 10 to 50 metres.

Defended gates

Defended gates by definition – that is, breaks in otherwise continuous or uninterrupted lines of walling – are

the most vulnerable elements of complex defensive systems. Two main categories of entrance gates should be distinguished: the simple-type gate, either straight or baffled – that is, featuring a bent-axis passage – and the complex-type chambered gate, including four or six piers (Fig. 3). Simple-type gates merely overlap curtain defences to form direct or indirect and usually flanked and/or outset entrance passages, while complex-type gates usually command defensive enceintes, and form independent and self-contained fortified units with straight or direct-axis entrances, generally flanked on both sides by towers, and featuring two or three sets of buttress-like structures en vis-à-vis.

The most common form of Mesopotamian defended gates of the 3rd millennium BC was the simple straight or direct-axis type. The average width of these entrances was c. 2.5 metres. Rectangular tower-like structures flanked many of them (e.g. Tell Hariri-Mari, Tell Bderi, Jerablus Tahtani, Tell es-Selenkahiye, El-Rawda).²³ At Tell Hariri-Mari, a defended gate's passage-way also featured two central piers.²⁴ Only at Tell Habuba Kabira has a simple-type bent-axis gate been reported.²⁵ Complex-type chambered gates appear to have been constructed only in Northern and Central Mesopotamia. The earliest



Fig. 3 Schematic plans of types of Early Mesopotamian defended gates (after Rey 2012, 112, fig. 67).

²¹ Rey 2012 and references therein.

²² Finet 1979, 79–97.

²³ Rey 2012 and references therein.

²⁴ Margueron 2004.

²⁵ Heusch 1979, 159–99.

known Mesopotamian prototypes of four-pier and six-pier gates were found respectively at Tell Bi'a-Tuttul and Tell Habuba Kabira between 2800 and 2500 BC.²⁶ In the Šakkanakku-EB IV A period (c. 2200 BC) a complex four-pier gate has been reported at Tell Hariri-Mari.²⁷ The EB IV B defended gate of Tell Taya, constructed between 2100 and 2000 BC was of the six-pier structure-type, and remains of corbelled arches indicate that it was at least partially vaulted.²⁸

Siege-craft and the evolution of fortifications

Having completed our brief survey of Mesopotamian fortification features in the 3rd millennium BC, it is possible to advance some general conclusions about the development of Archaic siege-craft and its influence on the evolution of complex defensive systems. Although we emphasize the military function of these large-scale constructions and earthworks, we do not deny, of course, that they also possess a symbolic nature. Yet, we believe that this symbolism is secondary in purpose.

If we lack unequivocal epigraphic and iconographic evidence for the early 3rd millennium BC, we can infer, however, that hand-held proto-battering rams were probably employed, that is, in a primitive form, because solid enceintes reinforced by sloping construction glacis are amply attested in the Jemdet Nasr–Early Dynastic I and EB I–II periods (c. 3100–2600 BC). It is likely, thus, that early Mesopotamian siege-craft remained in effect quite rudimentary (e.g. siege ladders, siege poles), and that the capture of fortified sites mainly relied on the employment of ruse and blockade.

If Mesopotamian complex defensive systems from c. 3100 to 2600 BC would have been quite impregnable, or at least difficult to overrun by storm, to breach, and undermine, the Early Dynastic III–Bronze III (c. 2600–2300 BC) clearly was a period of major innovations in direct methods of

assault. Mesopotamia and the Levant indeed witnessed several important advances: the appearance of battering rams and siege towers between 2500 and 2350 BC (Fig. 4). Four-wheeled chariot-like battering-rams are depicted on a unique Early Dynastic III seal-impression and many Tell Beydar-Nabada cylinder-seals²⁹ and occur in the so-called treaty between Ebla and Abarsal and several other administrative documents of Tell Mardikh-Ebla³⁰ as composite heavy-carts (gud-si-dili, literally 'one-horned-bull'), including four solid wheels and strong wooden poles (giš-gú-murgu), reinforced by bronze heads (giš-sag) and bronze tips (giš-eme). At Tell Beydar-Nabada, siege towers (an-zà-gar) are depicted either as four-wheeled simple-type platforms, or complex multi-floor platforms.

The Early Dynastic III–Bronze III period (c. 2600–2300 BC) also was a turning point both in the organization and the capabilities of military contingents: the probable emergence of standing armies consisting of professional soldiers (āga-ús) and conscripts (érin),³¹ the first assault troops in close phalanx-type formation composed of archers with simple or complex bows (giš-ban)³² – the range of which did not exceed 75 metres – and soldiers armed with long spear-like weapons bearing full-length top-curved siege-shields (kuš-e-īb-ūr),³³ the presence of support troops equipped with slings providing long-range barrages and covering fire, and engineer units and labourers entrusted with logistics and the construction of siege-ramps. Elite-like military contingents are depicted on the well-known Tell-Hariri-Mari pre-Sargonic relief³⁴ and occur in many official-type Sumerian epigraphic documents such as the Royal hymns of Šulgi, the Lamentations over the destruction of Sumer and Ur.³⁵

Such major innovations significantly increased the offensive capacities of campaigning armies of the first warring kingdoms (Ebla, Mari, Kiš, Ur, Uruk) and the predatory state of Agade and their influence on the art of fortifications was considerable: the reinforcement from c. 2500 BC of defensive talus-like glacis heaped against the outer face of the footings of curtains, and

²⁶ Miglus & Strommenger 2002; Heusch 1979, 159–99.

²⁷ Margueron 2004.

²⁸ Reade 1982, 72–8.

²⁹ Nadali 2009, 39–52.

³⁰ Steinkeller 1987, 14.

³¹ Lafont 2008, 23–48.

³² Civil 2003, 49–54.

³³ Eicheler 1983, 95–102.

³⁴ Parrot 1971, pl. XIV.4.

³⁵ Michalowski 1989.

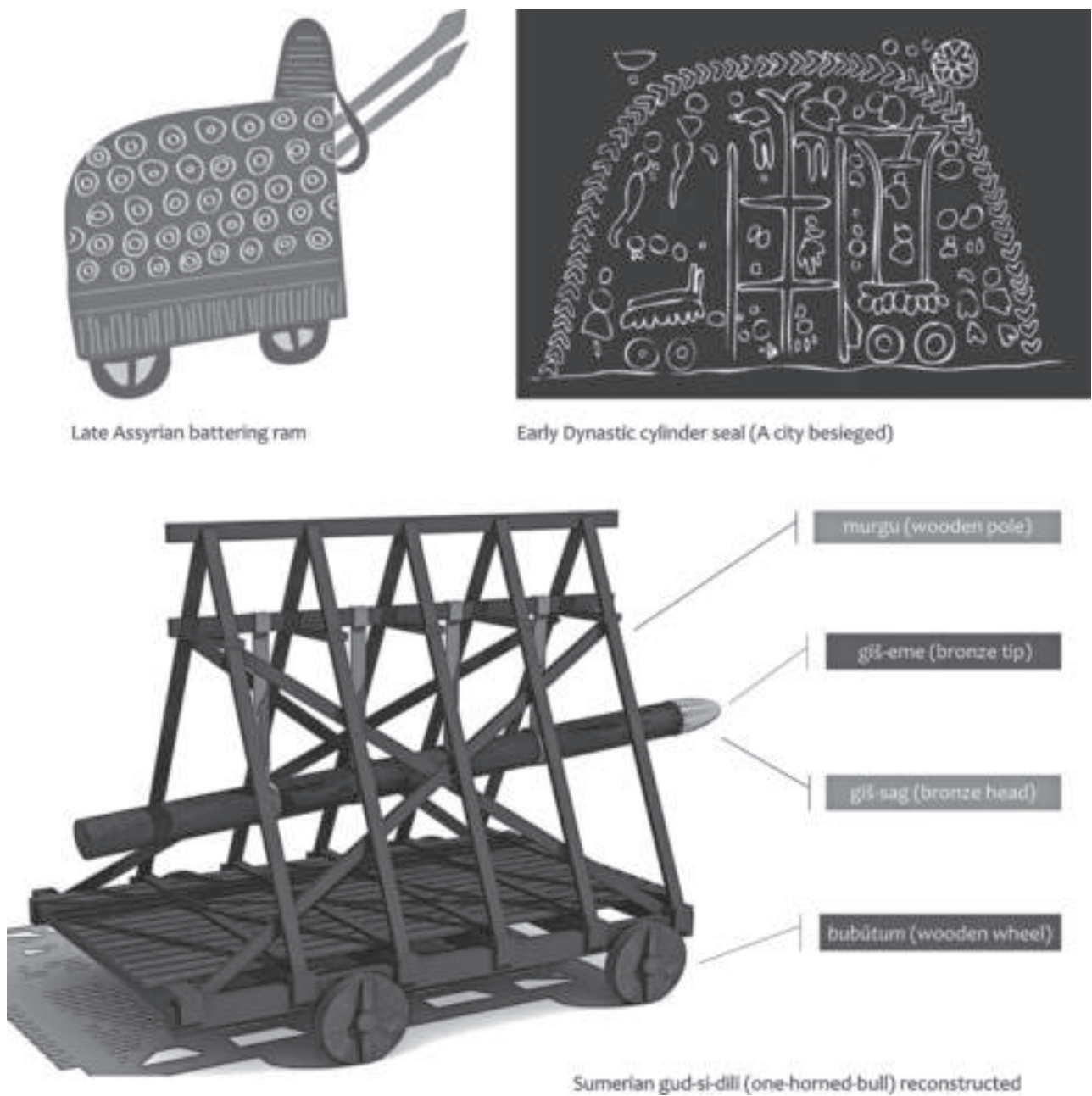


Fig. 4 Representations of Early Mesopotamian and Late Assyrian siege-engines. After Rey 2012, 134, fig. 67; 140, fig. 82; and redrawn from bas-relief of the palace of Teglath-Phalasar III (from J. Deshayes, *Les civilisations de l'Orient ancien, Les grandes civilisations*, Arthaud, Paris, 1969 p. 158, Fig. 58).

made of different materials such as earth, plaster, bricks, stone, primarily designed as an obstacle to breaching (e.g. Tell Hariri-Mari, Tell Ashara-Terqa, Tell Bderi, Tell Beydar-Nabada, Tell Chuera, Tell Rad Shaqrah, Tell Mozan-Urkeš, Tell Halawa, Jerablus Tahtani, Tell Bi'a-Tuttul, Tell Taya, Tell Kannas, Tell es-Selenkahiye); the spread from c. 2300 BC of massive defensive earthworks

and embankments of alternating layers of varying types of fills, that featured both interior and exterior slopes, which raised the level of the base of the city fortifications above the surrounding plain significantly improving its defensibility both against gud-si-dili - battering rams and an-zà-gar - siege towers (e.g. Tell Hariri-Mari, Tell Leilan-Šeḫna, Tell es-Sweyhat, Umm el-Marra).

Major developments in siege-craft and fortifications, of course, are intrinsically linked as each evolves to counter advancements within the other. This dynamic process reaches crucial peaks in the Old Babylonian and Late Assyrian periods.³⁶ Both *yâšibum*-battering rams and *dimtum*-siege towers are perfected and become more systematic: they are extensively cited between 2000 and 1800 BC in the Mari royal archives and also occur in the Isin (modern Ishan Bahriyat) and Ešnunna (modern Tell Asmar) epigraphic documents;³⁷ they are depicted between 900 and 700 BC on Ašur-nasir-pal II and Tiglath-pileser III palaces' reliefs.³⁸ These new advances in siege-craft resulted in the well-known development phases of the so-called Amorite and Neo-Assyrian fortification systems: complex enceintes, earthen ramparts, ballistic platforms and defended gates – all of which, thus, having clear forerunners in the Early Mesopotamian period – become extremely common features throughout the Near East.

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³⁶ Charpin 1993, 193–203; Fales 2010.

³⁷ Kupper 1997, 121–32.

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BUILDING THE FRONTIER: FRONTIER FORTIFICATIONS IN THE ASSYRIAN EMPIRE*

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Abstract

The purpose of this paper is to give a general picture of the different roles that the act of building fortified settlements had in the creation and maintenance of frontier areas in Assyria. As is well known, ancient frontiers are not easy to define and tend to correspond to broad areas where different polities exercise their hegemony, rather than territories crossed by borderlines of modern conception. Furthermore, the analysis of textual and archaeological sources reveal the existence of different kinds of frontier's scenario, according to the strategic, political, economic and cultural peculiarities of each region affected by Assyrian expansion. I will try to show how different kinds of frontiers were affected by different kinds of Assyrian territorial policies, which included the foundation or re-foundation of different typologies of fortifications. Major attention will be given to three types of fortified settlements: the 'fortified farmstead' (*dunnu*), a unit of rural habitation with very few military functions, the 'fortified military camp' (*ušmannu*, *madaktu*, *karāšu*), and the military 'fortress' (*birtu*). The 'fortified farmstead' is attested only for the Middle Assyrian period (14th–11th century BC), whereas the two military settlements are best attested in sources from the 1st millennium, during the great expansion of the Assyrian Empire (9th–7th century). Finally, in some cases, the act of 'building the frontier' can be recognized in the care and/or foundation of premises of political and cultural importance (palaces and temples), within fortified cities of regions that have been conquered by Assyria but are not completely under its control.

The title of this paper, 'Building the Frontier', might be misleading for two reasons. First, because the very idea of continuous borderlines between adjacent territories did not exist in the Ancient Near East.¹ However, even if no Great Wall was ever built during the Assyrian Empire, it appears clear how fortified settlements of various sizes and functions were the basic means through which frontiers were created. When set in strategic areas, they could defend a territory from possible invasions,

be military outposts for further conquests, and slowly strengthen the territorial control on the regions of new conquest. A second possible misunderstanding, which should be clarified, is the idea that the Assyrian Empire dealt with only one type of frontier, located at the foremost limits of its territories, and that the only fortifications that had a role in frontier policies were those with primary military functions. Quite differently, the analysis of the Assyrian case reveals, on one hand,

* I am grateful to Prof. F.M. Fales for his kind general remarks and his correction of the English text. Any mistakes or slips should be ascribed to the present writer.

¹ Cf. Parker 2001, 11, and Gandulla 2000.

the existence of different kinds of frontiers with peculiar geo-political, economic and cultural characteristics, and, on the other, an active role, in Assyrian frontier policies, of fortified settlements with both military and (also primary) civilian functions.

The purpose of this paper is to give a general picture of the relation between building a fortified settlement (but also specific premises within it) and the creation and maintenance of different kinds of frontier in the Assyrian Empire.

I will define 'fortified settlement' or 'fortification' as any settlement surrounded by defensive walls, independent of their size or typology of fortification (height of the walls, presence of one or more perimeters of walls). The mere existence of defensive walls, especially for minor centres, is a distinctive feature of (various possible degrees of) territorial instability. Furthermore, the analysis of military fortified settlements, in my opinion, can also be carried out by comparing fortifications of different sizes and primary functions, for two main reasons. First, they often share similar characteristics, in terms of use and structural features. Second, the possibility for a minor settlement to be enlarged and to become a bigger fortification is attested, which makes the comparison between the two less trivial.²

In royal inscriptions, human settlements are usually distinguished following a three-level hierarchy of classes of cities that defines the typical structure of a state in the eyes of the Assyrians.³ They are the royal city (*āl šarrūti*, *āl bēlūti*), the fortified city (*āl dannūti*), both strongly fortified, and the cities in the neighbourhood (*ālāni ša limēti*), without defensive walls. On many occasions, a settlement is simply dubbed as *ālu*, a term that does not give any information about its size or fortified nature, and can correspond to a large city as well as to a simple rural village.⁴ Nevertheless, there are other terms, which define more specifically some kinds of fortified settlements, typically found in frontier areas. They are the *dunnu* or 'fortified farmstead', a fortified unit of rural habitation with very few military functions – only attested for the Middle Assyrian times – and

two military settlements, the fortified military camp (*ušmannu*, *madaktu*, *karāšu*) and the fortress (*ḪAL.SU* / *birtu*), both best attested especially in sources from the 1st millennium BC.

We may distinguish between three main frontier contexts, and ideally subsequent phases, in which it is possible to analyse the role of building fortified settlements. A first context is that of the military campaign led into a territory outside the limits of the empire, where there is no stable Assyrian centre. Here, we find the act of building temporary fortified camps for the settlement of the army, the act of conquering, rebuilding and often renaming cities which previously belonged to the enemy,⁵ and that of building *ex novo* fortified cities and strongholds in the newly conquered land. This first phase may lead to two different scenarios. One is the slow territorialization of the region, through the creation of a network of Assyrian centres, cities and minor settlements, whose fortified nature depends on political conditions. Military penetration is followed by the creation of an administrative and political structure, which secures the Assyrian presence in the region, and ideally leads to a full territorial annexation. This is the case of the steppic region between the Tigris and Euphrates (modern Jezirah) during the Middle Assyrian period, and of other examples from the Neo-Assyrian Empire. In this context, beside the foundation of fortified settlements with functions related to political and economic colonization, it becomes significant, if not essential, to care for (or build *ex novo*) premises of political and cultural importance (palaces and temples) inside major fortified cities, aimed at a full integration of local peoples into Assyrian society.

The third context is typically encountered in regions that remain in the outer limits of the empire or within partially unstable sectors of Assyrian territory. These areas are often characterized by a strongly militarized frontier, where systems of strongholds, sometimes of massive size, are built as a stand against possible penetration of the territory and as outposts for possible punitive and expansionistic campaigns.

² For cases of territorial reorganization which involved the growing of minor settlements see, for example, Fales & Rigo 2014. Cf. also Gillmann 2005, for structural and functional comparisons between military fortifications of different sizes.

³ Cf. Liverani 1992, 125 and Fales 1990, 91, 94.

⁴ Cf. Van de Mieroop 1999, 10-1 and De Odorico 1995, 16.

⁵ See Pongratz-Leisten 1997b for an analysis of the act of renaming conquered cities in the context of Assyrian ideology of conquest.

The Jezirah in the Middle Assyrian period

The first frontier area to be considered is the steppic region between the rivers Tigris and Euphrates (mod. Jezirah), which by the end of Tukulti-Ninurta I's reign (1244–1208 BC) had been put under Assyrian control (especially the Upper Tigris, Lower and Upper Khabur and Balikh river valleys), but was then gradually lost until the final decay of the Middle Assyrian kingdom, in the 11th century BC.

Following Mario Liverani's theory, the Middle Assyrian expansion in this area followed the so-called model of 'network-empire'. He observed the presence of a series of Assyrian enclaves (palaces and cities) 'embedded in a native world', interconnected by a complex but functional system of routes that allowed constant administrative, political and economic communication and linked them to the capital Assur. The intermediate areas between these enclaves were, in Liverani's eyes, largely unprotected and inhabited by peoples who were hostile or at least extraneous to Assyria.⁶

Recent studies on the area, based on textual and archaeological materials discovered in the past twenty years, have provided a slightly different picture. As we already knew, Assyrian control of the region (especially around two tributaries of the Euphrates, the Khabur and the Balikh) was entrusted, since the time of Shalmaneser I (1274–1245 BC), to the Assyrian Grand Vizier, or *sukkallu rabi'u*. This high official also held the title of King of Ḫanigalbat (*šar māt Ḫanigalbat*), from the name which the Assyrians called the region at the time, and was a viceroy of sorts, with administrative, legal, diplomatic and military functions. From his headquarters in the city of Dūr-Katlimmu (on the Lower Khabur) the Grand Vizier administered the territories of the Jezirah through a system of districts (*pāḫatu*), each one controlled by a governor (*bēl pāḫete*) and minor officials. Each governor was entrusted with a series of Assyrian settlements, defined according to their size and fortified nature as *ālu*, 'city', *birtu*, 'fortress', and *dunnu*, 'fortified farmstead'.

The *dunnu* was a fortified unit of rural habitation, whose primary function was farming.⁷ It was named after its founder and was granted by the Crown to a single owner (and possibly to his family), who lived in a major city (e.g. the capital of the district). The term included the fortification and the farmland around it, which was an inseparable part of it, and all the farmers working under its administration were the owner's dependents. According to textual and archaeological sources, the size of a *dunnu* could vary, from approximately 0.36 to 36 hectares (1 to 100 *ikû*).⁸ The best-known *dunnu* so far is the one discovered at Tell Sabi Abyad, on the eastern side of the river Balikh. Here, archaeologists excavated a tower (used as storage, a treasury and a jail), the owner's residence, the residence of his 'chief steward' (*masennu*), who administered the farmstead in his absence, quarters for servants and scribes, and domestic premises.⁹ Beside its farming purpose, the *dunnu* could have minor military functions, such as the provisioning of horses, cavalry and war chariots to the owner, for policing the surrounding region.¹⁰

The archaeological surveys of the region showed a series of similar fortified settlements of one or two hectares distributed along the river valleys.¹¹ Even though the presence of extraneous or hostile peoples is attested in the region until the end of Middle Assyrian domination, the network formed by cities, fortresses and *dunnus* appears to have been well thickened. As a point of fact, textual sources retrieved from the archives of Tell Sabi Abyad and from those of the city of Dūr-Katlimmu, show the existence of 'stains' of continuous territorial power, located in many sectors of the Assyrian 'network', alternating with other areas where Assyrian presence could be guaranteed through diplomatic treaties.¹² Hence, the sources seem to give us an image of the area between Khabur and Balikh as that of a frontier region where Assyria was slowly obtaining territorial control through a system of fortified settlements, which had no significant military functions. On one hand, in fact, the *dunnu* had a primary purpose of farming (i.e. agricultural colonization). On the other hand, their security was guaranteed by regional actions of

⁶ Liverani 1988, 90.

⁷ The *dunnu* probably developed from the Mitannian *dimtu* 'tower', a fortified farmstead with its own territory, see Wiggermann 2000, 172, with previous bibliography.

⁸ Cf. Wiggerman 2000, 173, with previous bibliography.

⁹ Akkermans 2006, 204.

¹⁰ Wiggermann 2000, 196. Another well-known *dunnu* of smaller size is Dunnu-ša-Uzibi/Giricano, on the Tigris riverbank, close to the site of Tušhan/Zyaret Tepe. The site has produced a fully published archive belonged to a man called Aḫuni, which was in use during the reign of Aššur-bēl-kala (1074–1057 BC), the years of crisis of the Middle Assyrian kingdom that followed the reign of Tiglath-pileser I (1115–1077 BC). See Radner 2004, 52–3.

¹¹ Akkermans 2006, 209. Cf. also Cancik-Kirschbaum 1996, 99; Duistermaat 2008, 23; and Ur 2002, 74.

¹² See Fales 2011a, 21–3, with previous bibliography.

policy realized with the military equipment and personnel they provided to major cities.

A major concentration of *birtu*-type fortresses has been retrieved in southern Jezirah, on the Middle Euphrates, in the area of the ancient territory of Suḫu.¹³ This was a highly militarized frontier with systems of fortifications set on both sides of the river. The settlements were discovered during the salvage excavations of the Haditha dam project in the 1980s, and included 17 fortified sites dated to the 2nd millennium (three on the islands of 'Ana, Telbis and Bijan, nine on the east bank of the river and five on the western one). Six of these sites were organized following a pattern of two triple fortification systems. One group is formed by two massive square and double walled fortresses (Sur Jur'eh and Glei'eh) facing each other on the opposite banks of the river, plus another one (Sur Mur'eh) close to the eastern bank. The second system is composed by the fortress on the island of Bijan (identified with the island of Sapirutu of Tiglath-pileser I's inscriptions¹⁴), and by those in the sites of 'Usyeh (western bank) and Yemniyeh (eastern bank). Moreover, 40 sites had strata dated to the 1st millennium BC. Many of them were the same sites from Middle Assyrian times which provided evidence of Neo-Assyrian (e.g. Glei'eh) and Neo-Babylonian (e.g. 'Ana) presence.¹⁵ This large number of fortified settlements proves the existence, all through the Middle and Neo-Assyrian period, of one of the most strategic frontier zones of Assyria.¹⁶

The programme of slow territorial penetration shown by the sources was never completed, since in 12th and 11th centuries Assyria was hit by a crisis that forced it back to its original borders. Only starting a century later, were the first Neo-Assyrian kings able to reconquer and finally obtain full control over the region. By the end of Shalmaneser III's kingdom (858–824 BC) the Jezirah was considered as part of the Assyrian Homeland, and archaeological surveys of the area attest, for the first millennium BC, a great proliferation of unwallled farming villages (*kapru*) and a visible decreasing in the number of fortified settlements.¹⁷

Building the frontier in Neo-Assyrian letters

With the great imperial expansion of 8th and 7th centuries, starting with Tiglath-pileser III (745–725 BC) and Sargon II (722–705 BC), a second block of conquest is visible outside the Homeland's limits. This area can be divided, as suggested by Fales, into three main regions.¹⁸ To the west, beyond the Euphrates, were the Neo-Hittite states, resulting from the dissolution of the Hittite Empire during the 12th century, the Aramean polities from the Euphrates to the Mediterranean coast (Bit-Zamani, Bit-Bahiani, Bit-Adini, Bit-Agusi and Bit-Gabbari/Sam'al), and the Levantine coast up to the border with Egypt. To the north and to the east, the chains that formed the mountain ranges of Taurus and Zagros surrounded Assyria with a plethora of states of minor size, which were forced to make an alliance with more powerful polities, like Urartu or Assyria itself. To the south, the Babylonian region remained as a never completely tamed frontier, at times supported by its eastern neighbour Elam.

The penetration of these areas followed fluidly imperialistic policies, largely determined by existing geopolitical conditions and consequent opportunities, which brought to subjugation in vassalage or to the outright political annexation of conquered regions, case by case.¹⁹ The conquered territories were gradually absorbed into the provincial system of the empire. All the empire was (at least in name) in the hands of the king, and the provinces were entrusted to his governors (*šaknu*) and magnates (*rabūte*). Each province had a capital and minor settlements, while military fortresses were positioned in unstable areas, on the outer limits of the empire and as guarding posts of the main routes that connected the core of Assyria with its foremost territories.

The letters from the royal correspondence of the 8th and 7th centuries represent an important source for the analysis of the many roles of military fortified settlements in frontier areas, defined with the term

¹³ Fales 2011a, 24–30 with previous bibliography.

¹⁴ RIMA 2, A.O.87.4, 41; A.O.87.10, 41–2.

¹⁵ See al-Shukri 1985, Abdul-Amir 1997 and Tenu 2008. Note that many of these forts were used in Roman and Islamic times also.

¹⁶ Fales 2011a, 24–30 with previous bibliography.

¹⁷ Cf. Wilkinson *et al.* 2005.

¹⁸ Fales 2001, 13–20.

¹⁹ Bagg 2013.

taḫūmu.²⁰ These letters deal especially with two types of fortifications, the fortified military camp and the fortress.

The temporary fortified camps (*ušmannu*, *madaktu*, *karāšu*) were exclusively for military use. They were built during the military campaigns as outposts on the way for the regions affected by Assyrian conquest. This type of fortification was small and its only masonry element comprised the encircling walls, within which officers and soldiers dwelt in temporary structures (tents and pavilions).²¹ Once the campaign was over, the fortified camps were abandoned but not dismantled, in case of future use.²² Except for one (not fully clarified²³) case, there seem to be no archaeological remains of such camps and the best sources for their analysis are the textual documentation and the iconography of the decorative reliefs attached to the walls of the Assyrian royal palaces.²⁴ In such reliefs, the camps often appear to have been divided in two or four quarters, for higher officials and simple soldiers, separated by one or two crossing roads.

At a higher level, in terms of size and function, is the military fortress (ḪAL.ŠU, *birtu*), for which the archaeological finds are also very poor, whereas the textual references abound, both in royal inscriptions and, above all, royal correspondence. This type of fortification was big enough to host a permanent garrison and sufficient supplies for long periods of service or for military campaigns led beyond the territory under the fortress' control.

As for the military camps, the *birtu* type also proves to have been divided in quarters. In a letter (SAA XIX

60) sent by the governor of the city of Tušhan (Ziyaret Tepe) Dūr-Aššur to Tiglath-pileser III (745–725 BC), the official reports to the king about the construction of two separate quarters, one for the officials (*bīt ubri*) and one for the troops (*bīt naṭarte*).²⁵ These kinds of fortifications were typically used as stands against possible invasions, administrative centres for the recruitment and training of new conscripts, bases for territorial exploitation and border listening posts, where every movement of the enemy could be watched, also through intelligence reports (what can be defined with the Assyrian term *mašṣartu*²⁶).

Beside the already mentioned discovery of fortification systems in the area of the Middle Euphrates, archaeological excavations in the south-west of the Palestinian region have revealed the existence of groups of fortresses around the area of the 'Brook of Egypt' (Naḫal Mušri, some kilometres to the west of the modern border between Israel and Egypt). From here, the Assyrian strongholds could defend the region from possible invasions and control the main trade routes that led to Egypt.²⁷ Regroupments of fortifications in other border zones are found in textual sources. Several letters attest the presence of militarized frontier areas, on which stands of Assyrian fortifications were built right in front (*ina pān*) of similar fortified settlements held by the enemies (e.g. in modern south-east Turkey, on the frontier between Assyria and Urartu).²⁸ In royal inscriptions, the king sometimes celebrates the creation of such militarized areas by founding and rebuilding cities and fortresses, as in the case of Sargon II in the region of Kammanu – situated in the foremost north-west periphery of the

²⁰ *taḫūmu* is the Assyrian term for 'border, frontier, frontier-territory' mainly used in the royal correspondence of the 8th and 7th centuries. Other Akkadian terms for 'border/frontier' found in the Assyrian sources (in Standard Babylonian, Assyrian and Babylonian dialects) are *mišru*, *itū*, *šiddu*, *qannu*, *pulukku*, *pāṭu*, *kisurru*, and *kudurru*. For almost every one of them, three general meanings are involved in translations: 'border(-line)', 'boundary-stone/mark' and 'territory'. For meaning and uses of the term *taḫūmu*, see Wazana 1996 (especially fn. 2), with previous bibliography.

²¹ Fales & Rigo 2014.

²² See the pictures of abandoned (but left standing) camps on the Shalmaneser III Balawat doors in King 1915, pls (possibly) XIII, XXXVI, LIV and LX. A passage from a letter to King Esarhaddon (SAA XVIII 175: r. 8–22) seems to confirm the hypothesis of repeated use of fortified military camps: 'I have heard the Magnates say as follows: "We will set up camp in Dilbat". (But) if they set up camp in Dilbat, the people will starve. Also, no caravan will come to them; rather, their army will go out and plunder a caravan! Let them place camp within the enclosure of the camp of Babylon of last year, so that boats and water-skins may come to them.' See also Fales & Rigo 2014.

²³ Analysing the archaeological remains discovered during the Haditha Dam Salvation Project (1982–7) on the Middle Euphrates (see above), Tenu has identified many Neo-Assyrian fortified camps. However, not everybody agrees on the fact that they can be interpreted as permanent fortified camps (Nadali 2009, 104–5).

²⁴ See *passim* in Botta & Flandin 1846–50; Layard 1853a and 1853b; King 1915; Barnett & Falkner 1962; Barnett *et al.* 1998.

²⁵ See Parker 1997, where the letter is quoted under its former cataloguing number NL 67.

²⁶ The *mašṣartu*, or 'vigilance', was the duty, on the part of any subject of the Assyrian king, to keep eyes and ears open and to report anything improper taking place, whether in the capital city or in the most remote military outpost of the empire. For the different meanings of *mašṣartu*, see Fales 2001, 119 and Fales 2011b.

²⁷ Cf. Na'aman 1979 and more recently Bagg 2013, 132–9.

²⁸ See Dubovsky 2006, 33–72 for a summary of the Urartu-Assyrian frontier-conflicts.

empire – and Sennacherib (704–681 BC) in the area of Dēr, on the border between Babylonia and Elam.²⁹

Among the letters of the royal correspondence of the 8th and 7th centuries BC, there are two kinds of texts that deal with the construction of new fortified settlements or the renewal of old ones. They are the orders of construction, written directly by the king, and the reports that kept the king informed about the progress of the works. The recipients of royal orders, and authors of reports, are high officials, like governors of provinces or their deputies, but also other kinds, like officials entrusted with imperial policies in various areas of the periphery of the empire (SAA V 152, 160),³⁰ or commanders of fortresses (*rab birti*) (SAA XV 136). Moreover, often the letters were written not directly by the person in charge of the construction, but by a third person, who oversaw (or simply observed) the works that were conducted in the territory of his jurisdiction (SAA XV 166).

Frequently, the Assyrian king attentively follows every detail of the building project. The official in charge must be fast and efficient, and any delay needs to be well justified. We often find apologies and excuses for any kind of trouble or delay during the works, including preventive ones, aimed at avoiding the king's wrath, and even timid protests against any possible accusation of supposed non-compliance. In a letter (SAA V 211) from the province of Mazāmua (mod. Sulaymānīya, in north-east Iraq), the deputy governor Nabû-ḫamatua justifies a possible delay in the work, but ensures: 'The king, my lord, should not say: "He is a negligent servant: he does not do (his) work". I drive the servants of the king, my lord, day and night, they are glazing kiln-[fired-bricks] all day long.'³¹

The right place for the construction had to be checked in advance, for practical reasons that could also have social implications.³² The settlement had to be founded somewhere that was strategically secure and suitable

for the self-sufficiency of the troops, whose livelihood was based on agriculture, i.e. preferably adjacent to farmland (SAA XV 136: 12–15) and to a water course (SAA XIX 60: 4–7).³³

The choice of a suitable location was entrusted to governor officials (SAA XV 136: 12–15), or local experts. In a letter sent to Ashurbanipal from the Babylonian city of Kutê (SAA XVIII 154), the sender indicates two possible positions for the setting of a fortified camp, according to where the army should cross a river (Turna). A group of Arab allies will indicate the exact positions: 'My lord should pitch [ca]mp in two places, a[nd] they [should] cross (the river) [at] Upi and at Dūr-[Šarrukku]. Let the Ar[abs] indicate (the places) to h[i]m, and let him appo[int ...]'.³⁴

In a letter sent to the southern frontier, Sargon II reassures his official about the place chosen for a fortified camp despite the proximity to the Elamite territory:

[I am writing to you] right now: this suggestion, the [way he put it], is extremely good. You [know] that this pass [leading to] Urammu is [ver]y difficult [to march through]; there is absolutely no way the Elamite [troops] will be able to get at you. Don't be afraid; at the city of Urammu where you are to place the camp [there is] a plain which is [very] good for encamping; it is also [very] good for reconnaissance expeditions, there is [much] grass there, and it is a [good] place to rest.³⁵

Often orders and reports bear technical details of the building projects. We have already mentioned letter SAA XIX 60, in which Dūr-Aššur from Tušḫan minutely reports the construction works of a fortress. On some occasions (SAA V 152, 160 and SAA XV 136) the officials responsible for the construction works draw sketches of the project in progress to be attached to the report. In one case, for instance, Nabû-šumu-iddina, the commander of the fortress (*rab birti*) of Laḫiru (on the Babylonian border)

²⁹ See Sargon II: Fuchs 1994, Ann. 216–20, and Sennacherib: RINAP 3/1, 23 iv 47–53.

³⁰ Cf. Parker & Radner 1998, 153.

³¹ SAA V 211: r. 1–10

³² That this kind of fortified settlement had a function in the mechanism of *Pax Assyriaca* (see below, note 46) may be shown by this fragmentary (and in fact difficult to interpret) letter sent to King Esarhaddon (681–669 BC) from the Babylonian region: 'In their rear we are constructing the [for]t and bringing [garrison troops] into it, so the people will become reverent, turn to other matters and broken heart(s) will be put in place' (SAA XVIII 142: 16'-r. 3). Cf. also SAA XVIII 175: r. 8–22 (see above note 22).

³³ Parker 1997, 80–4.

³⁴ SAA XVIII 154: 5–8.

³⁵ SAA I 13: 5'–19'.

informs the king about the work done, probably, on the fortification's towers, and adds: '[Now then] I have drawn a sketch of the fort [on] leather (*mašku*) and am herewith sending it [to] the king, my lord'.³⁶

In a letter written by Sargon II to one of his officials in Babylonia (SAA I 18), the king gives detailed instructions for the building of a new fortress. The letter shows a deep concern for the possible occurrence of dangerous circumstances during the construction works. According to Sargon's words, the walls that the villagers are going to build have to be strong enough not to be easily destroyed (probably providing them with ramparts).³⁷ The king also orders the digging of two concentric moats around the fort at a sufficient distance one from another to set a series of temporary huts. The function of the outer moat seems to be that of giving time to the local people to take refuge behind the inner moat and within the walls under construction, in case they were attacked by the enemy during the works.³⁸

In a message (SAA I 29: 1–21) reported by the crown prince Sennacherib to his father Sargon II,³⁹ the vassal king of Kumme (mod. Cizre Palin, south-east Turkey) Arije, warns that the fortress that the governors of Assyria (*šaknūte ša šar māt Aššur*) are building in his territory could be attacked soon by Ukkean troops, allied to Urartu.⁴⁰ The period of the letter is presumably before the great campaign of Sargon II against Urartu in 714 BC, and the construction of a fortress by Assyrian governors in the area of Kumme might be ascribed to the atmosphere of hostility growing in the region.⁴¹

A pure military strategy is not the only reason behind the many building projects carried out in the frontier regions of the empire. In some letters, there are references to similar activities accomplished by provincial governors in

the context of regional territorialization, through policies aimed at consolidating and increasing the Assyrian presence. In a letter (SAA XIX 22) found at Nimrud and dated to Tiglath-pileser III, Qurdi-Aššur-lāmur, most probably governor of the province of Šimarra,⁴² apologizes for the delay in the reconstruction of part of the city of Kašpuna (modern Kusbā), at the foot of Mount Lebanon, saying that now he is personally dealing with the job. He claims to have cleared the site of debris and repaired the gate of the inner wall, and to have organized a garrison for its guard. The letter deals also with the Assyrian restrictions on Phoenician trade (by forcing them to pay taxes for the lumber brought down from Mount Lebanon and prohibiting them from selling it to the Egyptians or Philistines) and with the deportation of ten Isubean families via Immiu to Kašpuna. The letter should be dated after the defeat of Tyre in 734, and possibly after 732 when, according to the inscriptions of Tiglath-pileser III, the territory controlled by Kašpuna was entrusted to the governor of Šimarra.⁴³ It is, therefore, possible that the letter in question refers to the time when these territories passed into the hands of Qurdi-Aššur-Lāmur and that the work of reconstruction has to be considered as part of the territorial policies entrusted to this governor.

A different case is that of Lipḫur-Bēl (or Našḫur/Našḫir-Bēl), governor of Amīdi (modern Diyarbakir).⁴⁴ In his letter to Sargon II, he claims to have built a fortress and a city with a royal palace, on land that was formerly owned by another official (perhaps passed away). Now, the king requires the return of properties and lands, causing the governor's complaint.

[As to] the fields of the patrimony of Aššur-remanni, about which the king, my lord, wrote me, the royal bodyguard shocked me when he said: give up the pro[perty] the well, and the arable land!

³⁶ For other examples of similar sketches drawn on perishable material for the king's understanding see SAA V 160: 10', and especially, SAA V 152 r. 1–5, where Aššur-alik-pani, from the border with Urartu, informs the king that when he meets him at the city of Arpad he will carry with him a sketch of the works on a wooden panel (^{us}le'u): 'I shall bring [wit]h me [the wr]iting-[bo]ard on the works (in progress) [which] the king wrote [I should bring], and I shall have it read to [the king], my lord'. Writing-boards made of ivory and wood were found by Max Mallowan during the excavations at Nimrud in 1953 (Wiseman 1955).

³⁷ SAA I 18: r. 10'–1'.

³⁸ SAA I 18: r. 1'–7'.

³⁹ Fales 2001, 51 'Sennacherib aveva il compito di ricevere e vagliare i rapporti spionistici circa la situazione alle frontiere con Urartu, e quindi trasmetterle al padre, assente dal paese (SAA I 29–40; SAA V 281)'.

⁴⁰ For the vassal state of Kumme and its role in the Assyrian frontier policies against Urartu, see Parker 2001, 89–90. Cf. also Parker & Schmitt 1998, 131.

⁴¹ The campaign was recorded in Sargon II's *Letter to Ashur* (Thureau-Dangin 1912). See Zimansky 1998, 45–51 for a bibliographical summary of the many studies conducted on the subject.

⁴² van Buylaere 2002, 1021.

⁴³ Tadmor 1994, 176 Summ. 8: 9'; cf. Radner 2006, 62.

⁴⁴ SAA V 15: 1–20. Cf. also Baker & Streck 2001, 932–3.

(Regarding) the fields, the king, my lord, knows that [x] years ago I built a town in the king's field. Under the aegis of [the ki]ng, my lord, I have bought and added to it 400 (hectares of) field from [the sub]jects of [A]šipâ. I have erected a fort there. The perimeter of the town is [...] cubits; I have built a royal palace and drawn the king's likeness inside it. I have placed 200 stone slabs there and settled the king's subjects there.⁴⁵

Liphur-Bêl carried out the works not following a royal order, but 'under the shade/aegis of the king my lord' (*ina šilli šarri bêliya*), hence according to his own rights in administrating the territory within his jurisdiction. This included the construction of administrative palaces, which were decorated with the same kind of sculpted reliefs that one could find in the main Assyrian capitals, like Nimrud, Nineveh and Dūr Šarrukīn, and which were among the main instruments of imperial propaganda. The last phase of territorialization, as was pointed out at the beginning of this paper, included policies of political and cultural absorption of the local population. In this context, the fortified cities were the centres from which the *Pax Assyriaca* could be spread.⁴⁶ Examples from the Middle and Neo-Assyrian periods shed light on the significant impact brought with this kind of policy.

On one hand, recent discoveries in the Middle Assyrian frontier regions have shown a constant presence of bounds between local authorities and Assur, even after the crisis that hit the Assyrian kingdom in 12th and 11th centuries.⁴⁷ The inscriptions of the ruler of Tābētu (Tell Tāban, on the Lower Ḥabur), Aššur-reš-iši II (972–968 BC), and his successors prove the continuity of political relationships between some enclaves of Lower Ḥabur and the Assyrian core during the 'Dark Age'.⁴⁸ Similar cultural-political bounds are shown in the cities of Dūr Kathlimmu and Šaddikanni, where sculptures dated to the years of Assurnasirpal II (883–859 BC) were retrieved. Very recently, at the site of Satu Qala/Idu, on the Lower Zab (the Middle Assyrian south-eastern frontier), archaeologists found a series of bricks inscribed with the names of kings belonging to a local dynasty that developed after the Assyrian crisis. These bricks

show a language (Assyrian dialect of Akkadian), ductus (Middle Assyrian), and some grammatical features very similar to those of the bricks found in other Assyrian provincial capitals (e.g. Tell Bderi/Dūr-Aššur-ketta-lēšer). As the authors of the report underline, 'palaeography as well as styles of the decorations reflect contemporary developments in Assyria, hinting at continued ties to the informal empire of Assyrian cultural dominance'.⁴⁹

For the Neo-Assyrian period, in a letter (SAA X 349) written from the Babylonian city of Dēr on the frontier with Elam, the sender, Mar-Issār, urges the king about the need to finish the work on the city temple. Mar-Issār was the official responsible for the cult restoration of the region, he had to reorganize the cultic services and oversaw the reconstruction of the temples of Borsippa, Akkad, Uruk and other main urban centres in the region, including Dēr. For this city, Mar-Issār complains about the lack of cooperation between local Assyrian officials, which delays the works on the temple ('from the moment its foundations were laid, until now, the prelate and the officials of Dēr have been pushing it onto each other, and nobody has set about it. This year they have started to build, (but) one day they do the work, the next day they leave it'.⁵⁰). Furthermore, the prince of Elam is taking advantage of this lack of cooperation between Assyrian officials by sending his brick masons to do the work. It is very important, then, that the king should send a troop and a master-builder to finish the work and ensure his control over the area.

As already shown by Pongratz-Leisten in her study on the Akitu festival in the context of Neo-Assyrian politics, Dēr was one of the cities situated at the limits of the Homeland's territory, which ideally represented the borders of the Assyrian empire, facing the external chaotic world.⁵¹ By the end of his letter, Mar-Issār defines Dēr as a city 'on the frontier territory of another country' (*ina muḥḥi taḥūmu ša māt šaniti*). Here, the term *taḥūmu* seems to indicate, rather than a territorial area controlled by groups of opposing military fortresses, the degree of political and cultural/religious influence over the population of a major urban centre, which is not

⁴⁵ SAA V 15: 7–12.

⁴⁶ On the historical-political concept of *Pax Assyriaca* see Fales 2008.

⁴⁷ Fales 2011a, 31–2.

⁴⁸ The inscriptions were found at Tell Bedri and at Tell Tāban. See Maul 1992 and 2005.

⁴⁹ van Soldt *et al.* 2013, 219.

⁵⁰ SAA X 349 r. 11–18.

⁵¹ Pongratz-Leisten 1997a, 248–9.

completely under Assyrian control.⁵² In this context, the act of building a palace and/or a temple can be the most significant for the control of the frontier. A frontier that, we could say in this case, had to be built.

Abbreviations

RIMA 2	Grayson 1991
RINAP 3/1	Grayson & Novotny 2012
SAA I	Parpola 1987
SAA V	Lanfranchi & Parpola 1990
SAA X	Parpola 1993
SAA XV	Fuchs & Parpola 2001
SAA XVIII	Reynolds 2003
SAA XIX	Luukko 2012

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FORTIFICATIONS OF PREHISTORIC CRETE: THE CURRENT STATE OF RESEARCH*

Tomas Alusik

Abstract

The fortifications, or rather ‘defensive architecture’, of Neolithic and Minoan Crete was the topic of the author’s Ph.D. dissertation (2005), with the revised version published in 2007. In this paper, supplementary to the book, the state of study of Cretan prehistoric defensive architecture since 2006 is presented. The most important results of this research, both in the field (e.g. the sites of Gournia, Aphrodite’s Kephali or the area of Kritsa–Kroustas–Katharo) and on a theoretical level (chronological studies, GIS and Space Syntax analyses), are summarized and then analysed here. These investigations cover and have bearing on all phases of Cretan prehistory – Neolithic until the end of the Minoan period (Postpalatial period). Unfortunately, even though the new research has introduced a great amount of data, helping us to answer some questions relating to the function and physical appearance of prehistoric fortifications, many of the basic problems relating to Cretan prehistoric defensive architecture, i.e. the methodological, chronological, functional and constructional questions, have not been clarified or answered fully and require further investigation, either by excavation or theoretical studies. There is still a great deal of scope for future work.

Introduction

Since the 1980s there has been greater attention and interest in the study of fortifications from the prehistoric era on Crete. The Minoan civilization of Bronze Age Crete has long been considered a peaceable one. From the beginning of the 20th century until the end of the 1970s the Minoans were believed to be a peace-loving nation. This assumed lack of interest in war¹ has meant that much less attention has been paid to the martial features

of Minoan civilization, for example defensive or military architecture or warfare. Despite long-term research into Minoan defensive architecture, especially during the last 20 or 30 years, there are still many questions left and unresolved problems related to Minoan fortifications.

During the last 20 years many fieldwork projects (some on-going)² have uncovered, excavated or more closely documented a range of fortified sites or structures. Amongst the most significant results for the research of

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¹ The history of the research on Minoan defensive architecture is summarized in Alusik 2007, 9–11.

² See e.g. Alusik 2007, 12–13 (with further bibliography).

this period are the discoveries and closer examination of the fortified settlements of Livari Katharades,³ Rogdia Kastrokafala,⁴ Kritsa Castello,⁵ Oreino Kastri⁶ and Aspro Nero stou Paletsi;⁷ sections of fortification walls in Palaikastro,⁸ Petras⁹ and Gournia (see below); and peculiar buildings designated as 'guard houses' in the area of Sitia – Zakros¹⁰ (the sites of Choiromandres¹¹ and Karoumes¹² were thoroughly excavated) and the Kritsa-Kroustas-Katharo plain¹³ located at the foothills of the Lasithi Mountains. Therefore, it is possible to prove without doubt that defensive architecture existed on prehistoric Crete at least in certain periods. This research enables us to answer some further questions relating to the function, chronology and physical appearance of Minoan fortifications. Though a positive step forward in research, this causes many new problems concerning the wider or the general context of Minoan defensive architecture, for example the regional settings, chronological difficulties, relations between fortifications, defence strategies and so on.

Since 2000, the author has been concerned with the topic of Minoan defensive architecture, primarily during his Ph.D. studies, in 2007 publishing a book – a concise synthesis of the topic from an architectural viewpoint – based on his 2005 dissertation.¹⁴ In this book, the author divided Minoan defensive architecture into five basic types.¹⁵ Two of them (the so-called guardrooms and the so-called modifications of access systems) can be found within buildings. The remaining three types are enclosure/fortification walls,¹⁶ towers or bastions and so-called guard houses – a specific type of building which is reminiscent of forts or strongholds. The most important discoveries of recent years enable the categorization of enclosure/fortification walls (in combination with towers or bastions) and guard houses.

This paper acts as an amendment to the presented book.¹⁷ The author describes the most significant discoveries and results of research since 2006, both in the field and on a theoretical level, and the resulting new range of problems requiring research to be solved in the future. At the same time, it clearly presents a summary of the sphere of Minoan defensive architecture, reflecting the most up-to-date research.

To understand the topic of defensive architecture completely, it is necessary to set fortifications into a wider framework of Minoan warfare and understand their wider context(s) – particularly geographical, chronological, social and historical. A closer contextualization of defensible structures and their topography, together with archaeological findings must also be included. Consequently the author has given continued attention to the problem, in particular from the perspective of warfare and topography. In the following two sections the most important results of all fieldwork and theoretical studies related to defensive architecture since 2006 are presented according to the basic chronological periods of prehistoric Crete.

The most significant discoveries in the field

FINAL NEOLITHIC PERIOD

In recent years many new defensible Final Neolithic settlements, some of which were fortified, have been found and published. In the westernmost part of Crete (nomos Chania) is the site of Sfinari Korakas, located on the summit of a ridge c. 100 m above sea level,

³ Alusik 2007, 34–5 (cat. no. 44; with further bibliography).

⁴ Alusik 2007, 73–4 (cat. no. 141; with further bibliography).

⁵ Alusik 2007, 86–7 (cat. no. 151; with further bibliography).

⁶ Alusik 2007, 43–4 (cat. no. 71; with further bibliography).

⁷ Alusik 2007, 22–3 (cat. no. 15; with further bibliography); Schlager *et al.* 2010, 233–41.

⁸ Alusik 2007, 45–6 (cat. no. 73; with further bibliography).

⁹ Alusik 2007, 48–9 (cat. no. 77; with further bibliography); Tsipopoulou 2010; Tsipopoulou 2012, 55, fig. 9.

¹⁰ For the basic overview of the architectural type see Tzedakis *et al.* 1989, 60–74; Chrysosoulaki 1999, 78–83; Alusik 2007, 124–35.

¹¹ Alusik 2007, 27–9 (cat. no. 28; with further bibliography).

¹² Alusik 2007, 32–3 (cat. no. 39; with further bibliography); Vokotopoulos 2011.

¹³ Beckmann 2012; Beckmann in press.

¹⁴ Alusik 2007. He described here more than 200 sites with (more or less possible) examples of prehistoric defensive architecture in Crete.

¹⁵ Alusik 2007. For the basic division and closer definition of Minoan defensive architecture into five types see esp. pp. 8, 115.

¹⁶ These walls do not enclose the area completely in some sites. They just could have blocked the access to the site from one side only.

¹⁷ The terminology used in this paper is based on Alusik 2007.

covering an area of c. 100 × 20–60 m. The remains of a fortification wall can be seen along the northern and north-eastern edges of the ridge, the other sides of which were protected by natural cliffs.¹⁸ A site protected by a fortification wall on its southern side is situated on the so-called East Acropolis at Phalasarna, which is naturally defended on the other sides by high cliffs.¹⁹ Both sites are dated to phase FN IV. The excavation results of a small and very defensible multi-period site of Monastiraki Katalimata (nomos Lasithi), also protected by specific examples of defensive architecture, were published in 2008.²⁰ Katalimata is one of a few examples of excavated defensible and/or fortified sites with predominantly Final Neolithic (III) and Postpalatial occupation.

PREPALATIAL PERIOD

All examples of newly discovered and/or published sites from the Prepalatial period are located on the Ierapetra Isthmus (nomos Lasithi). Aphrodite's Kephali (to the east of Kato Chorio), which dates back to the EM I period, is a very specific site which architecturally and functionally stands in-between enclosure walls and guard house type structures (Fig. 1).²¹ The excavations conducted in 2007 discovered the remains of a house fortified by an enclosure wall which included small compartments

along a part of its length. It is unlikely to be a usual domestic habitation site (there were no animal bones, stone utensils or other characteristic artefacts), but more probably a guard-post (to the north of the house remains, an area used for signal fires was located – the ground was coloured red because of burning) or possibly a special refuge site (many large strange jars up to 1485 kg in weight were discovered).

Aphrodite's Kephali is unique during the Prepalatial period not only because of the existence of fortifications, but also because of the signal fire area. This method of signalling was supposed to have developed and functioned specifically in connection with the Protopalatial guard houses.²²

Kato Chorio Site 144 is situated on a ridge top overlooking the Episkopi valley close to Kato Chorio village and is surrounded by steep slopes on all sides except for the south-west.²³ Remains of walls of massive 'Cyclopean'/'oncolithic' masonry – probably a fortification – dated to the 'Late Prepalatial period' are visible along the ridge on the south-west and also at the other possible entrance on the north-east (in this case the walling may have originally formed a bastion). The area within these walls is c. 60 × 30 m.



Fig. 1 Aphrodite's Kephali, general view of the site from the east. EM I (photo: author).

¹⁸ Nowicki 2008a, 216–17, fig. 13.18.

¹⁹ Nowicki 2008a, 217, fig. 13.19.

²⁰ Nowicki 2008b. See also Alusik 2007, 42 (cat. no. 67, with further bibliography).

²¹ Betancourt 2008; Betancourt 2009, 17–20, 78–83, 104–7; Betancourt 2013.

²² Alusik 2007, e.g. 132–3, 147.

²³ Watrous *et al.* 2012, 132, pl. 8A (Site 144, Field 1265).

Epano Chorio Site 131 is located on a natural ledge within a ravine not far from Epano Chorio village.²⁴ The site has only one natural access route from the south, with cliffs on the other sides. The entrance is blocked by a rectangular structure built from ‘Cyclopean’/‘oncolithic’ masonry – most probably a kind of a ‘guard house’. Sections of fortification wall of the same construction technique are preserved on the northern and southern sides along the cliffs. The date of the defensive architecture is problematic, as the pottery from EM I–MM II phases is visible on the surface. Late Prepalatial pottery is scattered on the largest area (c. 80 × 80 m) of the site surface; on the other hand, the construction technique points to a Protopalatial date.

PROTOPALATIAL AND NEOPALATIAL PERIODS

‘Guard houses’

These are freestanding closed structures built from massive masonry (often called ‘megalthic’ or ‘Cyclopean’), which usually resemble a small fortress or stronghold (often called ‘phrourion’). Important discoveries have been made in sites with these ‘guard house’ structures.²⁵ So far several hundred of them have been mentioned or more closely described and documented. The structures often have an outer fortification and were usually part

of a much larger system of guarding posts, enclosure walls or barriers, and roads. It is usually presumed that (the system of) these structures had a great importance for the monitoring and defence of a specific region. On the other hand, some of these structures have only a secondary defensive function – usually one of guarding. In this case, such structures have a simple layout like farmsteads (often called ‘rural villas’ or ‘megalthic farmsteads’) and they usually resemble common habitation architecture. Their possible defensive or guard purpose is shown mainly in the construction technique (including the system of periboloi) and/or appropriate topographical location (above a road or pass, near a spring etc.), but their purpose unfortunately cannot be proved with absolute certainty. Many guard houses had already been built in the Protopalatial period but they were used also during the Neopalatial period (and frequently reoccupied in LM III). Buildings of this type were for the first time properly documented in the area of Sitia–Zakros (nomos Lasithi) since 1984 within the Minoan Roads Research Programme (directed by Yannis Tzedakis and Stella Chryssoulaki).²⁶ Of the several dozen guard houses the research was focused on a smaller number of sites, mainly on Choiromandres (Fig. 2) and Karoumes (with two guard houses referred to as Metriko Phylakio (Fig. 3) and Phylakio tis Thalassas (Fig. 4)).²⁷ In the last two decades some preliminary



Fig. 2 Choiromandres, the main building of the guard house. Protopalatial–Neopalatial periods (photo: author).

²⁴ Watrous *et al.* 2012, 130, pls 4C, 5A–B (Site 131, Field 1220).

²⁵ For the basic overview of this architectural type see Tzedakis *et al.* 1989, 60–74; Chryssoulaki 1999, 78–83; Alusik 2007, 124–35.

²⁶ See e.g. Tzedakis *et al.* 1989, 60–74; Tzedakis *et al.* 1990, 43–62; Tzedakis *et al.* 1994–6.

²⁷ For references see above footnotes 11–12.



Fig. 3 Karoumes-Metriko Phylakio, the main building of the guard house. Protopalatial–Neopalatial periods (photo: author).



Fig. 4 Karoumes-Phylakio tis Thalassas, the main building of the guard house. Protopalatial–Neopalatial periods (photo: author).

reports have been published but excavations and studies of finds are still being carried out. This research, apart from basic understanding of this architectural type's structure and its chronology, has brought an understanding of a local context of discussed buildings in the given region: primarily the relationship between the main building of the guard house and the connected

system of walls and watch posts. A series of short reports and specialized studies about various aspects of these sites has been published in recent years (e.g. household activities in Karoumes or a water management system in Choiromandres).²⁸ Many buildings resembling guard houses have been found in recent years by Sabine Beckmann in the Kritsa–Kroustas–Katharo plain

²⁸ See.e.g. *ARep* 2007–8, 94; Vokotopoulos 2011.



Fig. 5 One of the so-called guard houses in the area of Kritsa–Kroustas–Katharo plain (photo: author).



Fig. 6 One of the so-called guard houses in the area of Kritsa–Kroustas–Katharo plain (photo: author).

region (nomos Lasithi; on the eastern slopes of Lasithi Mountains).²⁹ Some of these buildings were mentioned in travel reports written by Arthur Evans and John Myres at the turn of 19th and 20th centuries (e.g. the site of Achladies/Kitten's Cistern).³⁰ Once again, these buildings are built of massive 'megalithic'/'oncolithic' masonry, often with connected periboloi (Figs 5–6). In many cases their topographic situation is not easily defensible and their density is so high that these buildings are situated only several dozens of metres from each other. These

structures are usually of Protopalatial date, often also used during the Neopalatial period.³¹ A structure of this kind (referred to as a 'fort'(?)) was also documented in Selima Site 120 on the Ierapetra Isthmus, on the slope of Thriphti massif above a pass to the Episkopi valley.³² A building constructed from 'Cyclopean'/'oncolithic' masonry and consisting of two rooms was most probably built for guarding the important route through the pass (which is the main access eastwards in the southern part of the Ierapetra Isthmus). There is both Proto- and

²⁹ Beckmann 2012.

³⁰ Evans & Myres 1895; Brown 1993; Brown 2001.

³¹ Beckmann 2012 and personal communication.

³² Watrous *et al.* 2012, 128, pl. 6C (Site 119, Field 128).

Neopalatial pottery on the surface of the site; however, the construction technique points to the earlier date.

Gournia

During 2008 and 2009, in the coastal area of Gournia (nomos Lasithi, eparchy of Ierapetra, c. 1 km west of Pacheia Ammos on the north coast of the island), one of the Minoan palatial centres, extensive remains of walls discovered between 1992 and 1994 during the Gournia Survey Project³³ were cleaned and documented.³⁴ Some of these walls were already referred to as fortifications in preliminary reports from the end of 1990s.³⁵ On the coast approximately 400 m northwards from the excavated Gournia town, in the area between the Gournia river and the Alazzomouri ridge, the remains of the so-called Shore House are situated on the largest of four promontories (on the second from the west). Approximately 20 massive walls were documented to the south and east of the Shore House, and according to their location and construction details, four of them were interpreted as town fortification walls.³⁶ The first line of fortification is situated on the coast and is created by walls leading east-west through the width of promontory of the Shore House and the easternmost promontory next to the Alazzomouri ridge. A stretch of massive masonry referred to as Wall 3, approximately 40 m long and 1.2 m (at its western end) to 1.8/1.9 m wide (at its eastern end) (Fig. 7) is situated southwards of Shore House and attached to the eastern part of the promontory.³⁷ Its northern façade, in front of which are several stones suggesting the existence of a bastion or a tower, is created by large stone blocks, its southern façade is made of smaller stones and the interior of rubble. In the western part of the promontory, the wall is not so well preserved, but a group of large stones and rubble suggest its extension and therefore complete blocking of access from the Shore House to the southern direction. Across the easternmost promontory close to the Alazzomouri ridge, remains of a similar wall are preserved – so-called Wall 4 – approximately 27 m long and 1.3–1.7 m wide.³⁸ Both exterior façades are built from large stone blocks, the interior from rubble. In front of the northern façade there is situated a large semi-circular platform with a diameter of 8.8 m, consisting of several concentric rows



Fig. 7 Gournia, harbour area, Wall 3. Protopalatial period (?) (photo: author).

of small stones forming most probably the foundation of a tower or bastion.

The second line of fortification is created by Walls 5 and 7 and is situated inland approximately 20–25 m southwards from Walls 3 and 4. The longest and most solid section is Wall 5 stretching from the edge of the river eastwards for a distance of 135 m (Fig. 8).³⁹ Its eastern part widens into a solid, roughly oblong tower salient for the line of south façade. The northern façade of the tower and whole wall is built of large blocks of dark-grey limestone; the southern façade is built of smaller stones and the

³³ Watrous *et al.* 2012.

³⁴ Watrous 2010; Watrous 2012; Watrous *et al.* 2012, 108.

³⁵ Watrous & Blitzer 1999, 906; Watrous *et al.* 2000, 475.

³⁶ Watrous 2010; Watrous 2012.

³⁷ Watrous 2012, 530–1.

³⁸ Watrous 2012, 531.

³⁹ Watrous 2012, 533–4.



Fig. 8 Gournia, harbour area, Wall 5 with the remains of a tower. Neopalatial period (?) (photo: author).



Fig. 9 Gournia, harbour area, Wall 7. Neopalatial period (?) (photo: author).

interior from rubble. Several metres westwards from the tower there used to be an access corridor (blocked at some later stage). The wall narrows in a westward direction from 3.7 m to approximately 2–2.5 m. The most interesting part of Wall 5 is the tower. Its northern façade is preserved up to two courses of masonry (approximately 0.9 m – it has the highest preserved height of masonry of the described enclosure walls). The interior is created by parallel rows of flat stones. On the eastern side, the Wall 5 boundary is on the paved street which was 1.4 m wide leading north–south from the harbour area to the ancient Gournia Town.⁴⁰ The so-called Wall 7 can be interpreted as a continuation of Wall 5 running eastwards to the Alazzomouri ridge (Fig. 9).⁴¹ This wall consists of a shorter (8 m in length; 1.3 m in width) north–south section located several metres away from the eastern side of the street, but then it turns to east and runs in a west–east direction for a distance of 52 m. The width of this wall varies between 0.8 m in the middle to 1.1–1.4 m on its eastern and western ends. It shows the same construction as the above-mentioned walls – the northern façade is built of massive boulders, the southern one of smaller stones. A gate on the western part of the area in question belongs among others to the specific examples of defensive architecture.⁴² A 2.2 m wide passageway with several paved steps is carved into the 5 m high bank of the river, to the northern part of which a wall is attached. These four walls and the gate together create a very interesting and, in some perspectives, specific fortification system.

No architectural remains suggesting the existence of fortification on the eastern and western side of the area have been found. It seems that in this area the inhabitants relied on the defensive features of the river gorge (with up to 15 m high cliffs) and the steep slope of Alazzomouri ridge. Regrettably, due to previous research, all walls in the area of the Gournia harbour were only cleaned and documented, not excavated; therefore their chronology is not clear. Their construction technique – large massive boulders of the outer façades set directly on the ground or (in places) on a levelling course of small stones, with a rubble core – and the construction of the towers or bastions show many parallels with East Cretan (defensive) structures of a Protopalatial date.⁴³ However, pottery collected in 2009 around the rectangular tower of

⁴⁰ Watrous 2012, 531–3.

⁴¹ Watrous 2012, 531.

⁴² Watrous 2012, 530.

⁴³ The same construction technique can be found e.g. in the sites of Aspro Nero stou Paletsi, Choiromandres or Karoumes – for references see footnotes 7, 11–12.

Wall 5 was exclusively of Neopalatial date.⁴⁴ In addition, this wall abuts the paved street, which would suggest that Wall 5 was constructed in the Neopalatial period only.⁴⁵ It is highly probable that the northern, coastal fortification line was already built in the Protopalatial period and the second – southern, inland one was added in the Neopalatial period.

The only significant results of fieldwork since 2006 related to the defensive architecture of the Postpalatial period, are the publication of the excavation of Monastiraki Katalimata (with its important Postpalatial occupation phase) and the documentation and excavation of the so-called guard houses in East Crete (some of which were reoccupied in LM III; see above)

The most significant results of theoretical studies

Recently, a new chronology of the Cretan Neolithic was published, which divides the Final Neolithic period into four phases (FN I–IV).⁴⁶ This enables us to date the FN sites more precisely and to differentiate the various phases of their foundation and/or abandonment. Concerning the theoretical studies dealing with the actual defensive architecture, the author has recently proved – in the case of topographic analysis of 22 chosen Prepalatial settlements – that the existence or absence of a good escape route and a refuge area is fundamentally interrelated with the existence or absence of defensive architecture.⁴⁷ In the cases of non-existent fortification walls (or other forms of defensive architecture) the inhabitants of such settlements had to rely on different complex defence measures, needing a suitably good escape route and area of refuge. Due to the way other sites are situated they do not have any functioning escape routes or refuge areas. In these cases their defence is ensured by fortification/enclosure walls.

Sander Brabander analysed the real defensibility of 17 guard houses in the Sitia–Zakros area on the basis of GIS

and Space Syntax. He confirmed that these structures actually had defensive qualities, although the rate of defensibility differs per building and method.⁴⁸

Analyses

The above described discoveries and the results of research on them have expanded our knowledge of Minoan defensive architecture. Sections of enclosure walls in Gournia are the longest and the best preserved parts of fortifications at palace centres of Minoan Crete. Therefore, it is clearly proved that at least some of these sites were fortified even in the Neopalatial period – the period of the greatest development of Minoan civilization, during which, according to tradition,⁴⁹ the Minoans lived in general peace. From the defensive (tactical) perspective, we can discuss the combination of two lines of enclosure walls: the older (forward) one is located directly on the coast and blocks access through the isthmus of promontories. The newer (inland) one is located several dozen metres away inland and is clearly delimited by the topographic constraints of the site (a river gorge on the west and the steep slopes of the Alazzomouri ridge on the east). From an architectural viewpoint, the enclosure walls are strengthened by semi-circular or oblong towers, which improve their defensive qualities, and – in case of the rectangular tower of Wall 5 – protect the most vulnerable parts, i.e. the access corridor and the paved street.

The closest parallels to the walls at Gournia are the enclosure walls with semi-circular/semi-oval or rectangular towers or bastions in Aghia Photia⁵⁰ (MM IA; Fig. 10) and in the palatial town of Petras (MM II to Neopalatial period; see above) in East Crete. Long stretches of (probable) town enclosure walls were also documented in Palaikastro (of Protopalatial and Neopalatial date; see above), Malia⁵¹ (Protopalatial or even late Prepalatial (?) date) and Knossos⁵² (Protopalatial date). It must be added that such massive enclosure walls of any kind of site do not occur again until LM IIIB–C phases.

⁴⁴ Watrous 2012, 533.

⁴⁵ The paved street – as a part of the main street system of the town – dates most probably to MM IIIA – see Watrous 2012, 531, n. 35.

⁴⁶ Tomkins 2007; Tomkins 2008.

⁴⁷ Alusik in press.

⁴⁸ Brabander 2012. His thesis – together with author's above-mentioned research on Prepalatial sites – is among the first examples of such kind of topographical and architectural research of Minoan defensive architecture.

⁴⁹ Evans (1928, 60–92, esp. p. 79) called this concept 'Pax Minoica'. It was strongly maintained till the end of 1970s.

⁵⁰ Alusik 2007, 18 (cat. no. 4; with further bibliography).

⁵¹ Alusik 2007, 89–92 (cat. no. 154/6–11; with further bibliography).

⁵² Alusik 2007, 74–6, 82–3 (cat. no. 145/1–2, 7; with further bibliography).



Fig. 10 Aghia Photia, the detail of the enclosure wall with bastion/tower. MM IA (photo: author).

So-called guard houses are important and crucial not only for a better understanding of Minoan defensive architecture but also for comprehension of some aspects of Minoan warfare (such as attack and defence strategies) and of the details of the ‘history’ (the destructions, founding or abandonment of some sites or regions etc.) of some periods as well. These structures are usually interpreted as military stations – as one can assume from the term – controlling the area (including the road system).⁵³ From the general appearance and topography of guard houses three groups of functions of these structures can be deduced and summarized: military functions (e.g. the guarding and the military control of an area, keeping and securing the road system), political functions (e.g. the demonstration of power and presence in an area) and other, especially economic and administrative functions.⁵⁴ When presuming their military qualities, the defensive significance of the system of guard houses (together with roads and look-out posts) can be interpreted as forming the very first line of defence – which can be called ‘demonstrative’ – in case of danger. Thanks to their systematic placement in the landscape forthcoming danger could be identified in time, the information communicated and the danger reduced or stopped. The basic aim is apparent – to suppress any military actions or riots at the very beginning or, alternatively, to keep enemies far from

centres or a settlement concentration.⁵⁵ However the dense concentration of such structures in the Kritsa–Kroustas–Katharo plain area documented by Beckmann does not testify in favour of an active monitoring and defence system.⁵⁶ There are too many of these buildings situated too close together and therefore they could not function as watch posts or fortresses. Consequently Beckmann interprets them as farmsteads.⁵⁷ A model of the complete control and monitoring of larger territories (or at least their borders) is, on the basis of these facts, more difficult to defend. On the other hand, as was recently proved by Brabander (see above), these structures had various grades of defensive qualities.

This shows that the problems related to guard houses are far more complex; that real functions and military significance were most probably different in various parts of Crete. It is necessary to create a different, more suitable and universal model of interpretation of these structures. One of the alternatives would be setting apart, within every study area, specific micro-regions to examine relationships between these buildings in question within their framework and subsequently in connection with neighbouring micro-regions. In the author’s opinion, within individual micro-regions with more sites and/or such structures, (at least) one building of this type could have had a defensive/military role

⁵³ See e.g. Tzedakis *et al.* 1989, 60–74; Chryssoulaki 1999, 78–83.

⁵⁴ Alusik 2007, 131–5.

⁵⁵ Alusik 2007, 147–8.

⁵⁶ The dense concentration of ‘megalithic/oncolithic’ structures was also observed in Karoumes bay – Vokotopoulos 2011, 138–9.

⁵⁷ Beckmann 2012; Beckmann in press. Vokotopoulos 2011, 143, also thinks that in Karoumes bay ‘... the most strongly defended and strategically sited buildings may be interpreted as guardhouses, but the majority of them were probably farmhouses.’

and functioned as what we perceive to be a military guard house or at least as a look-out post. It should be emphasized that these buildings were multi-storeyed (as it is proved by some of their remains and architectural details such as stairways) and we can imagine that there was a good view from their roofs (or some rooms adjusted particularly for this purpose).

The problems of guard houses are closely connected to questions regarding attack and defence strategies in the Minoan period. These strategies were very complex and related to the location and topography of the site and fortifications were built not only, but especially where such features did not provide adequate defence. All these aspects are interrelated and can highly influence the location and form of the settlements and this may not be the only factor in choosing a place where a settlement would be founded and built. Defence clearly had an important role in the choice of a location alongside economic reasons (presence of good sources of fresh water, fertile soil, grazing land and access to the sea for fishing and trade). But at the same time, defensive architecture (or its actual appearance) was not vital; the local topography with possible escape routes and a possible refuge area was equally, or even more important. A complete analysis of Minoan defensive architecture in relation to the methods of defence may help to improve our understanding of various aspects of Minoan civilization, for example of the character of some periods and the process of creating new territorial units. It may also contribute to our improved knowledge of the processes inside Minoan society (that gradually led to the formation of the palatial civilization) and especially of warfare (in a wider sense).

Conclusions

From what has been presented above it is clear that there are still many questions and problems relating to Minoan defensive architecture, particularly connected to the wider setting or rather the contextualization of it. Above all, a secure dating of many specimens of defensive architecture is missing; that is to say, the chronological specification is often based only upon the surface finds and analysis of construction techniques and architectural parallels. Without clear dating, it is not possible to understand fully some periods of the Minoan civilization (for example the turning horizons

such as EM III/MM IA), especially from the historical and social point of view. The relationship between defensive architecture and warfare, primarily attack (besiegement) strategies is also not quite clear. In addition, the meaning of different types of defensive architecture used for defending territories and/or settlements still has – despite some progress – not been clarified in recent years. In this connection, it is necessary to take into serious consideration that those specific kinds of defensive strategies (or specific activities), like escape routes and refuge areas, may have been employed in Minoan Crete, leaving little archaeologically detectable evidence.⁵⁸ One of the important tasks of further research will be to understand a regional context of defensive architecture on the basis of detailed topographic analysis of sites with defensive architecture and analysis of their relationships with other sites within both the same micro-regions and the neighbouring ones. With regard to the great landform features of the Cretan landscape, too many specific and topographically well-defined micro-regions exist in some parts of the island. In such places, in the Minoan period, small local communities could have been created, which could have been independent at least in some phases.⁵⁹ However, they were often so distant from the nearest larger settlement or centre that in the most acute cases their inhabitants were forced to defend themselves.

To conclude, the discoveries made in recent years have brought a lot of new interesting and important facts to light which help us to better understand the topic of Minoan defensive architecture. The fortification walls in the harbour area of Gournia, without any doubt, prove that some of the palace centres were fortified during both the Proto- and Neopalatial periods. The so-called guard houses are key to understanding the complex meaning of defensive architecture and character of not only Minoan warfare (including attack and defensive strategies) but also of social questions.

It is obvious that to understand this further architectural and topographic/GIS analysis needs to be completed. Even though our knowledge in the field of defensive architecture has expanded in recent years, this topic – and some of its associated aspects – cannot be regarded as completely solved and explored. In following years, research should proceed both in the field – preferably with excavations which will result in a clear stratigraphy and chronology of some cases of defensive architecture – as well as on the theoretical level.

⁵⁸ Alusik in press.

⁵⁹ Schlager 1999, 176, suggested this for the site of Aspro Nero stou Paletsi.

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LATE MIDDLE HELLADIC AND EARLY LATE HELLADIC FORTIFICATIONS: SOME CONSIDERATIONS ON THE ROLE OF BURIALS AND GRAVE MONUMENTS AT CITY GATES*

Stefanie Hubert

Abstract

This paper deals with sites on the Greek mainland and the adjacent islands which possess Early Mycenaean fortifications, whose main gates are associated with contemporary or earlier graves. Those were subsequently provided with superstructures above ground such as tumuli and grave circles, functioning as representative monuments at the city entrance. As the grave architecture and grave goods show, these tombs belonged to individuals of high social status, either to the founders of a first local dynasty or to contemporary rulers who rendered outstanding services to the city, for example by planning or building the fortification walls.

Moreover at some graves there are indications of cult activity: ceremonial drinking rituals were performed and votive offerings were deposited in honour of the dead. The reverence for the grave occupants may have served to stimulate their apotropaic powers to guard the city walls and city gates, as in the well known hero cults of Classical times.

The tradition of associating monumentalized graves with gates was revived in Late Mycenaean times, as can be concluded on the basis of the incorporation of the LH I Grave Circle A into the LH III B fortifications at Mycenae. This peribolos was not only crowned by a new imposing architecture, but also oriented towards the newly constructed main gate, whose relief above the lintel displayed lions as protectors of the citadel. While the gate relief served to provide symbolic protection for the fortified acropolis (supplementing the technical devices for actual defensibility), Grave Circle A served to evoke respect for the local history with its line of rulers – from the founding dynasty to the current ruling class.

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Introduction

At the end of the MH period and the beginning of the LH (Early Mycenaean) period many settlements on the Greek mainland and the Aegean islands were either primarily fortified or reinforced with stronger defensive systems. This article focuses on an aspect of these fortifications, more precisely on their city gates, which are frequently associated with monumental graves. It is common knowledge in Aegean Bronze Age archaeology that tholoi and tumuli not only served as mere tombs but also as status and identity markers for certain individuals and local communities. Thus they were erected in places of high visibility or frequency – at topographical viewpoints or close to major routes connecting the settlements.¹ Grave monuments at city gates constitute another related category – one that has not been studied thoroughly, probably due to the fact that late MH and early LH settlements are generally in

a poor state of preservation and/or publication. Thus all considerations and conclusions drawn in this paper must remain tentative.

Aigina Kolonna

The citadel at Kolonna on Aigina was fortified for the first time in phase V, corresponding to EH III in the last centuries of the 3rd millennium BC.² This defensive system was modified in four succeeding phases until the end of the MH period (Aigina V–IX).³ In the latest MH phase, belonging to the settlement of Aigina IX in the years between 1800 and 1650 BC, a new outer fortification wall was constructed lower down the hill, encircling the suburban settlement, which had spread outside the upper fortifications (Fig. 1).⁴ In the south-eastern part of the suburban city wall a grave was constructed at the outer fortification façade (Fig. 2),⁵ very close to the south gate.⁶

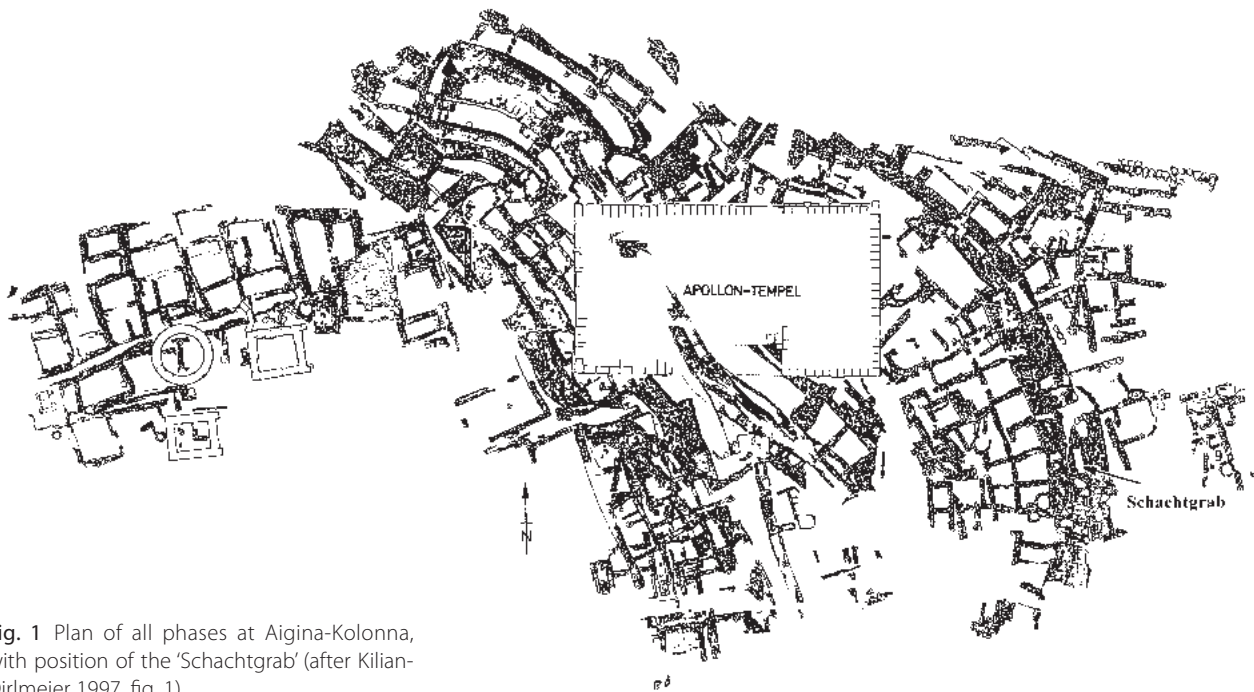


Fig. 1 Plan of all phases at Aigina-Kolonna, with position of the 'Schachtgrab' (after Kilian-Dirlmeier 1997, fig. 1).

¹ On this subject see the proceedings of the conference on 'Ancestral landscapes' published by Borgna & Müller Celka 2011, especially Galanakis' article (2011).

² On the first fortification period, see Walter & Felten 1981, 28–33.

³ On these periods, see Walter & Felten 1981, 43–82.

⁴ The suburban settlement and its suburban city wall are not yet published. For preliminary information, see Walter 2001, 118–27; Wohlmayr 1989, 151–3.

⁵ The shaft grave is published by Kilian-Dirlmeier 1997.

⁶ The position of the grave at the south gate is clearly stated by Kilian-Dirlmeier and also by Hans Walter in the foreword of the publication, see Kilian-Dirlmeier 1997, 11, 67. However this gate is not clearly visible in any published plans, thus until now one has had to rely on the meagre information cited above. To get a clearer picture of the topographic situation it is to be hoped that the suburban city wall (together with the included gates) will be published at long last.



Fig. 2 Aigina-Kolonna shaft grave on outer façade of the suburban city wall, with south gate in front (after Kilian-Dirlmeier 1997, table 2).

The rubblestone walls of the rectangular grave chamber, which was built directly onto the rocky ground, were originally covered by a wooden ceiling, as is usual for Helladic shaft graves.⁷ The tomb contained one skeleton of a tall male, who at the time of his death was in his mid-twenties (Fig. 3).⁸ The golden diadem on his head as well as several bronze weapons and other items surrounding his body⁹ allude to the high social status of the deceased warrior, whose residence could have been the so called 'Großsteinbau' recently discovered on the upper acropolis.¹⁰ Minoan Kamares ware and Melian imports were among the grave goods and date the tomb to the later MM/MH II period (second half of the 18th century BC).

Lacking the full publication of the suburban city wall, it is not clear whether the grave or the suburban city

wall was built first. Both structures belong to the period Aigina IX and are constructed parallel to each other. I. Kilian-Dirlmeier assumed that the city wall was built first and that shortly afterwards the grave was intentionally placed in this prominent position beside the gate, fitting the aristocratic background of the grave occupant.¹¹ Moreover she suggested that after the burial ceremony the subterranean grave chamber was crowned by a semi-spherical earth mound, leaning against the city wall.¹² However, while realizing the problematic effects of this impressive but rather indefensible monument at the foot of the city wall, the mound was removed shortly afterwards. Instead, according to Kilian-Dirlmeier, the grave was included into the settlement area by constructing a tower around its outer edge and by levelling down the original city wall behind its inner edge.¹³ These building activities led to

⁷ On the construction of the grave see Kilian-Dirlmeier 1997, 67.

⁸ Walter 2001, 146.

⁹ For an analysis of the grave goods see Kilian-Dirlmeier 1997, 13–66.

¹⁰ Felten (2007, 17–18) assumed a connection between the grave and the 'Großsteinbau' which contained similar pottery. Concerning the 'Großsteinbau' generally, see Gauß *et al.* 2011, 76–87.

¹¹ Kilian-Dirlmeier 1997, 67.

¹² Kilian-Dirlmeier 1997, 68, fig. 35.

¹³ On the construction of this tower, which is only preserved on the south and east sides, and on the associated pottery, see Kilian-Dirlmeier 1997, 71–82.



Fig. 3 Remains of the burial in the northern section of the Aigina-Kolonna shaft grave (after Kilian-Dirlmeier 1997, table 1).

the part destruction of the shaft grave, whose walls were nonetheless repaired instantly and whose rich grave goods were not looted.¹⁴ After these modifications the newly built tower not only protected the adjacent city gate but also prevented the grave from being seen coming from the outside while making it accessible only from the inside of the city.

Such constructional efforts can only be explained by the high significance assigned to the buried person, even after his death. Walter suggested that the deceased was an important chieftain of the city who had fallen in battle outside the suburban city wall and that he was later buried and venerated on exactly that spot.¹⁵ Indeed the location

of the tomb, which is not part of any known cemetery outside the city wall, but a single monument at the foot of the city wall close to a gate, needs to be explained. Setting aside Walter's hardly provable idea that the place of burial correlates with the place of death, Kilian-Dirlmeier's point of view seems more plausible – that the location beside the city gate was chosen for the sake of high visibility and thus for personal or dynastical propaganda.¹⁶

However, this purpose must have been abandoned after a short time due to the integration of the grave into the city wall. By then another aspect could have played an equally important role: it is possible that like later in Classical times the bones of heroic ancestors were thought to possess magical and apotropaic powers, which in case of an enemy attack could protect the city walls and especially the gates, the most vulnerable parts of any defensive system.¹⁷ This hypothesis could explain both the isolated and exposed position of the grave and the fact that it was not destroyed during the construction activities but rather incorporated into the city wall, protected by the new tower.

Ayia Irini, Keos

Similar observations can be made in Ayia Irini on the island of Keos, situated across from the south-eastern coast of Attica. The settlement was initially surrounded by a fortification wall in phase IV, corresponding to the MC II Period.¹⁸ At the end of the Middle Bronze Age the growing settlement had spread outside the city walls and thus in phase V a new fortification was built.¹⁹ Shortly afterwards, in Early Mycenaean times, this structure was renovated and extended.²⁰ By then at the latest the main gate was set in the south-eastern part, providing direct access to the temple area (Fig. 4).²¹

Just in front of the gate there are two tombs, no. 40 (28) and no. 58 (29).²² They belong to a cemetery area east of

¹⁴ Nonetheless the stratigraphy of the filling in the southern part of the grave chamber was disturbed and both lower legs of the skeleton were lost, see Kilian-Dirlmeier 1997, 72.

¹⁵ Walter 2001, 146–51.

¹⁶ Kilian-Dirlmeier 1997, 82.

¹⁷ Walter (2001, 150–1) already pointed to this possibility.

¹⁸ On the earlier fortifications, see Caskey 1971, 367–8; Overbeck 1989.

¹⁹ On the 'Great fortifications', see Caskey 1971, 373–7; Davies 1986.

²⁰ The fortifications of the Early Mycenaean period, corresponding to phase VI, are not yet published. For preliminary information, see Caskey 1971, 373–7; Davies 1986, 12.

²¹ As belonging to phase VI the gateway also awaits full publication. For preliminary information, see Caskey 1971, 376–7; Davies 1986, 14–15.

²² For the not yet fully published tomb 40 (= no. 28 in newer publications), see Caskey 1971, 378–9; Overbeck 1979, 80–3; Overbeck 1984, 116; Hiller 1989, 141; Kilian-Dirlmeier 1995, 50–1; Kilian-Dirlmeier 1997, 86–8. For the likewise not yet fully published tomb 58 (= no. 29 in newer publications), see Caskey 1971, 381–2; Overbeck 1979, 103–7; Overbeck 1984, 116–17; Hiller 1989, 141.

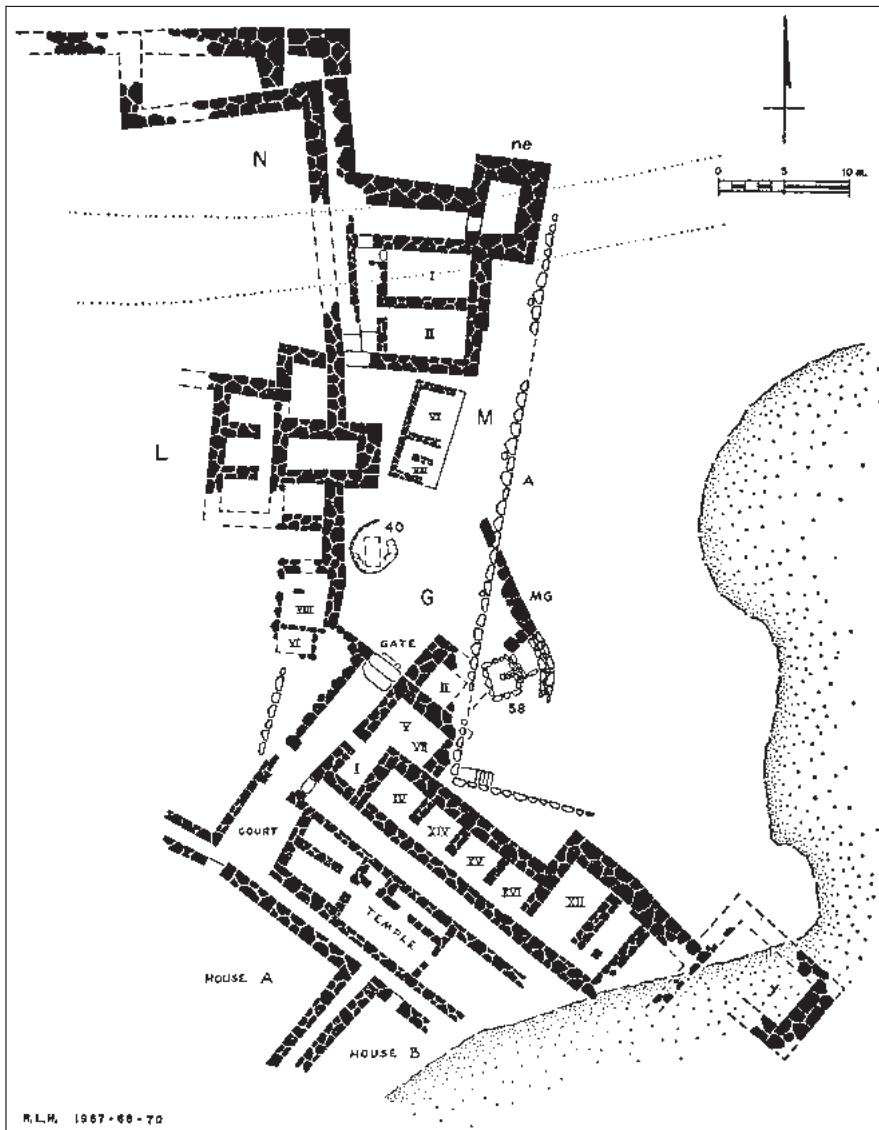


Fig. 4 Plan of the eastern part of the settlement and fortifications of Ayia Irini phase V–VI (after Caskey 1971, fig. 9).

the settlement predating the fortifications.²³ Unlike the other more simply constructed tombs, the two graves at the gate possess rectangular chambers below surface level, which were constructed of rubblestone walls, closed by large horizontally laid slabs and covered by a heap of earth and stones, just like the Aigina shaft grave.

Unfortunately both tombs in Ayia Irini had been robbed either in Antiquity or by modern tree planters, so the time of their construction cannot be exactly determined. However a few pottery fragments remained, suggesting that both burials occurred in phase V, at the very end of the MH/MC period²⁴ and thus roughly contemporary to or slightly later than the building of the new fortifications.

²³ On the phase IV cemetery, see Overbeck 1989, 184–205. On the graves belonging to phase V, see Davies 1986, 79–80. For an overview, see also Caskey 1971, 372–3. The graves of phase VI (and later) are not yet published.

²⁴ The date of both graves is controversial. While Overbeck thinks the grave chamber was built in phase VI (see Overbeck 1979, 82–3; Overbeck 1984, 116; Overbeck 1989, 198), both Hiller and Kilian-Dirlmeier argued in favour of an earlier construction in phase IV or V (see Hiller 1989, 140–1; Kilian-Dirlmeier 1995, 50–1; Kilian-Dirlmeier 1997, 88).



Fig. 5 Grave circle above tomb 40 (28) in front of the city gate of Ayia Irini V–VI, seen from the north (after Davies 1986, table 43:b).

Structures above ground were added to both subterranean tombs some time after their closing: Grave 40 (28) was provided with a row of upright slabs set in a curved line (Fig. 5); above grave 58 (29) a small part of an enclosure wall made of rubblestone is preserved. Both structures were most likely once closed to a full circle and supported earth mounds.²⁵

Among all the other tombs in the suburban cemeteries only these two tombs at the city gate possess an elaborate grave architecture and were marked by impressive above-ground monuments. As in Aigina, powerful local rulers – maybe the ones responsible for the planning and/or construction of the new fortification walls – must have been buried in these graves and they must have been of such importance to the local community that their tombs were not only placed in a most prominent position but also monumentalized by grave circles, to be seen before entering the city through the main gate.

Whether these grave monuments at Ayia Irini also had a religious function is hard to say due to the poor state of preservation and publication. While MH tumuli in general could have played a role in cultic rituals,²⁶ platforms above tombs were obviously used for funerary rites or as bases for grave offerings in a local tradition already in the preceding phase IV.²⁷

Malthi

The densely inhabited area on the hilltop of Malthi was surrounded by a city wall in phase III in the late MH period.²⁸ The main gate to the citadel was placed in the south, where the otherwise steep hill provides a rather gentle slope. Apart from a few cuttings and wheel marks in the rock there are few architectural remains of this gate because the wall along the whole southern section was heavily destroyed.²⁹

²⁵ On these structures and their probable later erection see Caskey 1971, 378–9, 381–2; Overbeck 1979, 80–3, 103–7; Overbeck 1984, 116–17; Hiller 1989, 141; Kilian-Dirlmeier 1995, 50–1; Kilian-Dirlmeier 1997, 86–8. For general considerations on MH tumuli and their construction on round or ring-shaped foundations, see Andronikos 1968, W107–10; Zavadil 2000, 119–26.

²⁶ On the religious function of MH tumuli, see Whittaker 2010, 535–43. According to Whittaker MH tumuli functioned not only as elaborate tombs for individuals of high social status, but also as landmarks for the territory claimed by the local dynasty, whose members were buried beneath the tumuli. By performing religious rituals at the tumuli during the funeral practices or on annual occasions afterwards the local elite could strengthen both their position of power and the corporate feeling of the social community, as Whittaker presumes.

²⁷ On this see Overbeck 1989, 184–205.

²⁸ On the date of construction, see Valmin 1938, 22–5, 69–77.

²⁹ On the difficult reconstruction of the fortification wall and the south gate, see Valmin 1938, 18–19.



Fig. 6 Plan of the south gate area at Malthi-Dorion phase III-IV (after Valmin 1938, plan 3).

Directly to the east of the gate three graves are cut into the rocky ground (nos 37–9), two of them lined with stone walls.³⁰ The most elaborate one contained the primary burial of an adult male, the other two being secondary ossuaries, containing the collected and fragmentary remains of at least 11 burials. According to the pottery these three graves are the earliest on the site, belonging to the very beginning of the MH period.³¹ Among the other intramural burials that are scattered across the settlement area and belong to the MH and LH periods only these three graves were surrounded by a partly preserved elliptical formation (area C3) constructed of upright stone slabs (Fig. 6) and thus forming a kind of grave circle.³² The excavator interpreted the structure, which probably once contained a tumulus, as a memorial monument for the grave occupants who he believed to be the founders of the earliest MH settlement at Malthi, the single burial being the chief ruler of this first local dynasty.³³ Although this hypothesis is hardly provable, the phenomenon of building a tumulus as a marker for

the arrival of a new local dynasty and accordingly for new building activity is to be found elsewhere in Messenia and the Argolid at the beginning of the MH age.³⁴

When the settlement was fortified, the grave circle was either covered by the fortification walls or was somehow incorporated into their inner façade.³⁵ According to Valmin the position of the new main gate was deliberately chosen close to these earlier graves '[...] to remind either the defenders of the town or those who entered the gate of the ancestors buried in the three graves'.³⁶ Besides this possibility the main reason for placing the gateway on this spot may have rather been the natural topographical conditions: one must keep in mind that already before the fortifications and the gateway were constructed the easiest ascent to the hill was on the southern side, passing the grave circle.

In Malthi another building needs to be mentioned. Contemporary to the construction of the main gate a



Fig. 7 The 'sanctuary of the grave cult' at the south gate in Malthi, seen from the north (after Valmin 1938, fig. 23).

³⁰ On the grave contents, see Valmin 1938, 188–91.

³¹ Valmin's 'Adriatic Ware' found in these graves is not of EH date, as he supposed, but of MH origin, so the graves should date to the early MH period. Nonetheless they remain the earliest on the site, see Valmin 1938, 187.

³² Valmin 1938, 18, 187–8.

³³ Valmin 1938, 130, 190–1.

³⁴ See Whittaker 2010, 535–43.

³⁵ The wall is almost totally destroyed in this section on the east side of the gateway. Only rock cuttings supposedly functioning as foundations for the outer façade of the fortification wall remain, see Valmin 1938, 18–19. Because of the missing stone blocks it is not clear whether they were built over the whole grave circle or whether they just formed a line on the outer (south-east) side of it, thus making it accessible from the north-west side within the citadel. The latter possibility would offer a parallel development to the Aigina-Kolonna shaft grave.

³⁶ Valmin 1938, 188.

double room complex was placed between the grave complex and the gateway, providing direct and open access at least to the latter.³⁷ This complex consists of two large rectangular rooms (C1 and C2), each containing one stone base (most likely for a central pillar supporting the roof) and one platform built of flat stone slabs and set against the dividing wall shared by both rooms (Fig. 7).

Due to thick ash layers and the remains of animal bones beneath and above these platforms the excavator interpreted them as altars, used for burnt offerings and other sacrifices in honour of the dead who were buried in the adjacent graves, that themselves had also contained large amounts of ash, bones and carbonized matter.³⁸ The religious function of this 'sanctuary of the grave cult', as Valmin called it, was later doubted by other scholars, who interpreted the platforms as domestic hearths.³⁹ While a domestic character seems highly unlikely for this complex because of its unique architecture and its position at the main gate, the platforms could indeed have functioned as hearths, but rather serving the preparation of communal ceremonial meals, organized by the local authority and held in honour of their dead ancestors. As in Late Mycenaean times, when we have Linear B evidence especially from Pylos, such feasts could have enabled the ruling dynasty not only to strengthen their social position but also to act as benevolent and pious patrons of the city. The main gate seemed to be a proper location for such rituals serving the safety of the settlement and its inhabitants.

Peristeria

The MH settlement at Peristeria was surrounded by a fortification wall, generally and tentatively dated to the

beginning of the Early Mycenaean period.⁴⁰ The wall can be traced only in a short section on the south-western side of the hill, where there exists one gateway; due to the gentle slope on this hillside it is probably the main gate.⁴¹ A paved street led through the entrance passage to the inner part of the citadel, where one immediately encounters two tholos tombs (nos 2–3). On the summit of the hill stands another tholos (no. 1), originally covered by a large tumulus, c. 40 m in diameter.⁴²

The preliminary publication of the fortifications makes it difficult to get a clear picture of their chronological relation to the tombs. Although intramural burials in simple earth- or cist-graves occur in some MH sites on mainland Greece – as we have seen in Malthi – tholos tombs are typically situated outside settlement areas, at the feet of the acropoleis or on neighbouring hill slopes. Thus in Peristeria one would suspect different time frames for the tholos tombs on the one hand and the fortifications on the other. However this is not the case. The tombs can be dated according to their contents: in the floor of the smallest tholos (no. 3) a rectangular pit contained the disturbed remains of two secondary burials and many grave goods, among them pottery, metal vases and gold foil, dating to the shaft grave period in LH I (around 1600 BC).⁴³ The adjacent larger tholos (no. 2) and the one on the hilltop were erected in the succeeding period of LH II A (around 1500 BC).⁴⁴

The two tombs at the city gate are accompanied by two segments of a peribolos wall (Fig. 8) cutting through both dromoi and thus built after the tombs themselves. The segments were at least connected to a half circle at the southern side (where the ground slopes down) and probably supported an earth mound above both graves.⁴⁵ As the masonry technique of the south-eastern segment

³⁷ On the 'sanctuary of the grave cult', that according to the pottery was used in late MH and early LH times, see Valmin 1938, 126–31.

³⁸ Valmin 1938, 128. On the ash layers above the graves, see Valmin 1938, 191.

³⁹ Doubts on the cultic interpretation of this room complex were expressed by Mylonas and Rutkowski, while van Leuven again favoured Valmin's point of view, see Mylonas 1951, 69–76; Rutkowski 1972, 293–6; van Leuven 1984, 8–9.

⁴⁰ Due to the lack of published pottery this date remains tentative. Based on general constructional analogies with other fortification walls (Malthi, Pylos) a construction in LH I is preferred, see Hope Simpson & Dickinson 1979, 167; Hope Simpson & Hagel 2006, 55. An already existing settlement in MH times can be assumed because of a MH tumulus with pithos burials on the Koukirkou hill c. 500 m to the west.

⁴¹ On the fortifications and the gate, see Marinatos 1965, 109–20; Hope Simpson & Hagel 2006, 54–5; Kalogeroudis 2008, 227.

⁴² See the up to date discussion in Boyd 2002, 169.

⁴³ Marinatos 1965, 114–19, tables 130–44. The pit was probably cut in a second phase by opening the lower courses of the blocking wall in the stomion, see the discussion in Boyd 2002, 168–9, 171.

⁴⁴ On tholos 2, see Korres 1976, 546; Hope Simpson & Dickinson 1979, 167–8; Boyd 2002, 169, 172; Hope Simpson & Hagel 2006, 55. On tholos 1, see Korres 1976, 492, 546; Hope Simpson & Dickinson 1979, 168; Boyd 2002, 168–9, 172.

⁴⁵ Marinatos thought the peribolos was older than the tholoi, encircling older shaft graves beneath them, see Marinatos 1962, 91–5. Pelon interpreted the peribolos as a retaining wall for a tumulus, heaped over the tholos tombs immediately after their closure, see Pelon 1974, 39. Korres believed the wall segments were not peribolos at all, but only closed to a half circle on the southern side, functioning as a dividing wall between the tombs and the new settlement area in LH II–III A, when the tombs had already gone out of use, see Korres 1976, 517, 519. Tzonou-Herbst compared the masonry techniques of the two peribolos wall segments and came to the conclusion that each segment was built contemporary to its adjacent tholos (SH I and SH II A respectively), crossing each dromos, see Tzonou-Herbst 2002, 182–3.



Fig. 8 Peribolos wall around Tholos 3 in Persisteria, seen from the north (Photo: H. Matthäus).

is identical to the fortification wall,⁴⁶ it is most likely that these two structures are roughly contemporary, both erected sometime in LH II, shortly after tholos 2 was closed.

Thus, when the acropolis was fortified at the end of the LH II period, the two tholos tombs at the new main gate were not destroyed but surrounded by a peribolos that (whether supporting an earth mound or not) could have functioned as a spatial and symbolic boundary between the world of the living and the world of the dead (as also the peribolos around the tholos on the hilltop).

Furthermore, as in Malthi, there are indications of a cult practice developing at these tombs close to the gate. Along the southern outer edge of the peribolos wall a large number of terracotta figurines and pottery, mostly kylikes, were found in earth layers mixed with ash. These items were laid down between LH II and possibly throughout the whole LH III period, thus over a few hundred years.⁴⁷ Marinatos, the first excavator, interpreted them as offerings made in honour of the dead and Tzonou-Herbst, who only recently published a very detailed study on the contextual analysis of Mycenaean terracotta figurines, came to the same conclusion. She also pointed out that these ritual deposits at grave circles are to be found elsewhere at Mycenaean tholos tombs,

for example at Mycenae, and usually went together with ritual drinking and libations in honour of the deceased ancestors.⁴⁸

As the tholos tombs in Persisteria are the earliest remains on the site and beyond doubt must relate to individuals of high social status, it seems very probable that they belonged to the chief rulers of the first local early Mycenaean dynasty who also founded the settlement on the acropolis, the remains of which are only sporadically excavated and published. When the settlement was fortified one or two generations later, their tombs were incorporated into the city and the main gate was set close to the two tombs, which were already standing on the gently inclining hillside providing the natural ascent to the acropolis. At the same time a kind of ancestral cult seems to have started at the boundary wall around the two tombs, which lasted probably as long as the settlement was inhabited. It is very likely, though not provable, that both tholos tombs or rather their superstructure served as a representative memorial monument at the city entrance and that the cult activity served to stimulate the protecting powers of the ancestors.

Pylos

On the Epáno Englianos hill in the vicinity of Pylos, where in Late Mycenaean times the so-called Palace of Nestor was a major supra-regional centre, a wealthy settlement must have already existed in Early Mycenaean times, as is testified by the remains of a fortification wall and the tholos graves in the vicinity.

The preserved wall segment on the north-eastern edge of the hill, excavated by Carl Blegen, contained a gateway, through which a stepped and paved street led to the buildings on the summit, now lying beneath the later palatial structure.⁴⁹ Outside the gate the street continued in a direct line to the east, where a tholos tomb (no. 4) is located at a distance of c. 70 m.⁵⁰ The gate and the tomb are roughly contemporary, dated around the very beginning of the LH I period.⁵¹

⁴⁶ Küpper 1996, 27.

⁴⁷ Marinatos 1962, 92, 95, table 97a–b; Marinatos 1965, 114; Korres 1976, 513–14, 521, 533, 543; Hope Simpson & Dickinson 1979, 168.

⁴⁸ Tzonou-Herbst 2002, 183–4, 194, 222, 298.

⁴⁹ On the fortification wall and gateway, see Blegen & Rawson 1966, 17, 19, 31–2, figs 259, 416; Blegen *et al.* 1973, 4–18; Hope Simpson & Hagel 2006, 52–3.

⁵⁰ On tholos IV, see Blegen *et al.* 1973, 95–134; Boyd 2002, 149–51. The grave chamber was found heavily disturbed by later interventions and contained many objects ranging from MH to LH III as well as at least 17 burials, of which not much remained except skull fragments. For a good map showing both the fortifications with gateway and the neighbouring tombs, see Galanakis 2011, fig. 3.

⁵¹ On the date of the tholos tomb, see Blegen *et al.* 1973, 107; Boyd 2002, 151.



Fig. 9 Tholos IV opposite of the Early Mycenaean gateway to the Epano Englianos hill in Pylos, seen from the west (Photo: Author).

Already Blegen noticed that the axis of the gateway was aligned to the dromos and entrance of the tholos (Fig. 9), but was not sure whether to think of a coincidence or an intended orientation.⁵² Having in mind the sites mentioned before, the latter explanation seems more probable. Galanakis came to the same conclusion, as also other tholos tombs around the acropolis plateau seem to have been placed at important topographical spots on the ascent to the hilltop.⁵³

The chronological and spatial/visual connection between Tholos IV and the gateway speak in favour of some connection between the grave occupant and the early Mycenaean fortifications. As in Peristeria it is perfectly possible that the city gate was intentionally aligned to this tomb, because it belonged to a member of the early Mycenaean founding dynasty, in order to pay him homage and to create an impressive visual impact for all visitors of the settlement.

Mycenae

As in Pylos also in Mycenae the settlement with its palace flourished in Late Mycenaean times. Due to the extensive building activity on the acropolis hill in LH III we have almost no architectural remains of the Early Mycenaean period.⁵⁴ However – as in Pylos – we can indirectly assume the existence of a prosperous settlement because of the cemetery that can be traced on the western slopes of the acropolis hill.⁵⁵ This cemetery was in use since the MH period and contained a great number of pit-, cist- and shaft graves, of which only a few were surrounded by low peribolos walls, the so-called Grave Circles B and A,⁵⁶ dated to the end of MH period and the beginning of the LH period, respectively.

Grave Circle A, which concerns us here, included some small shaft graves and six larger ones – the famous tombs excavated by H. Schliemann.⁵⁷ They belong to a new, more elaborate architectural type and contained the well-known rich artefacts with strong Minoan influence, thus reflecting the emergence of a wealthy local dynasty with foreign connections, who ruled in the early LH I period in the 16th century BC.

In analogy to the Early Mycenaean sites shown before, it is very likely that also in Mycenae the associated settlement on the acropolis hill was already fortified in this time, although we have no archaeological data to verify this assumption, for in Late Mycenaean times the massive Cyclopean walls and the included buildings were set upon whatever earlier structures there may have been.

When the first Cyclopean fortification walls were built in LH III A, in the middle of the 14th century BC,⁵⁸ more than two hundred years after the shaft grave period, the cemetery with both grave circles lay outside the walls, though Grave Circle A stood close by and opposite to the first citadel gate, comparable to the earlier arrangements in Ayia Irini and Pylos.

In LH III B, in the middle of the 13th century BC, the citadel area needed to be enhanced. Therefore a new wall

⁵² Blegen *et al.* 1973, 4.

⁵³ Galanakis 2011, 224–6.

⁵⁴ LH I fresco and pottery fragments of high quality were indeed found on the acropolis plateau, so the existence of a first ‘palace’, whether fortified or not, stands out of question. A short overview on the early history of the hill can be found in French 2002, 29–49.

⁵⁵ On the cemetery, see Wace 1923, 118–19; Blackburn 1980, 250–1; Taylour *et al.* 2000.

⁵⁶ On the possible existence of tumuli above both grave circles see Protonotariou-Deilaki 1990, 85–91; controversial to that hypothesis see Dickinson 2011, 429–32.

⁵⁷ For a reprint of Schliemann’s excavation report, see Schliemann 1964. On the publication of the artefacts, see Karo 1930.

⁵⁸ On the (three) Late Mycenaean fortification periods, see Mylonas 1983, 72–7; Iakovidis 1983, 24–37; French 2002, 52–7.

segment was erected on the south-western slope of the acropolis, crossing the earlier cemetery. All the tombs in this area were destroyed or built over by the new fortifications and buildings within, except Grave Circle A, which was incorporated into the citadel, occupying a great part of the newly gained space. As the floor level was higher within the citadel, the Early Mycenaean shaft graves and their peribolos were indeed covered by a few metres of earth. Thus a new enclosure was erected on a high and massive retaining wall that roughly follows the line of the older structure underneath. The new circle was not merely constructed of rubblestone walls as its predecessor, but of two concentric rows of rectangular stone panels, covered by horizontal slabs, thus forming a kind of Π -shaped balustrade or bench.⁵⁹

We do not know whether the exact locations of the graves within this peribolos were still known at this time, but at least some of the Early Mycenaean grave stelae, which had originally stood on top of the subterranean shaft graves as surface markers, were re-erected on the new ground level.⁶⁰ In any case this new peribolos was the first thing to be seen when entering the citadel through the Lion Gate.⁶¹ Moreover it can be no coincidence that the well-constructed entrance passage to the grave circle was on the north side, aligned in the direction of the Lion Gate, which belongs to the same building programme (Fig. 10).⁶²

These extensive renovations at the city entrance and at Grave Circle A show that the dynasty, ruling in Mycenae



Fig. 10 Late Mycenaean entrance passage to Grave Circle A, with Lion Gate in the background, seen from the south (Photo: H. Matthäus).

⁵⁹ On the older Early Mycenaean peribolos, see Mylonas 1957, 104–5; Iakovidis 1983, 38. Because of the curvature of the remaining segment, Gates believed that the earlier peribolos was not closed to a full circle but rather resembled a half circle, supporting the sloping ground, see Gates 1985, 265–7, fig. 1. On the renovation of the peribolos in LH III B and its architecture, see Wace 1923, 105–12; Wace 1949, 62–3; Mylonas 1957, 103–27; Iakovidis 1983, 38–9.

⁶⁰ Schliemann found the stelae with their decorated sides facing west, but all on different surface levels beneath the LH III B floor. Thus it is very probable that they were lifted from time to time (between LH I and LH IIIA) with the constant rising of ground level. Fragments of stone friezes decorated with half-roses and spirals were also found by Schliemann within the filling of the peribolos, their function and original position (inside or outside the peribolos?) remains obscure; stylistically they should be later than the decorated stelae. On the stelae, see Schliemann 1964, 90–6 (nos 24, 140), 100–8 (nos 141–50); Wace 1923, 127–46; Karo 1930, 29–35; Wace 1949, 60–1; Mylonas 1957, 109–11. On the tumuli that are reconstructed according to their existence in Grave Circle B, see Andronikos 1968, W 109; Gates 1985, 265. On the stone friezes, see Schliemann 1964, 109–10 (nos 151–4).

⁶¹ The granary, blocking the direct view when stepping through the Lion Gate today, is a later addition of the end of LH IIIB2 or the beginning of LH IIIC and does not belong to the original layout of the Late Mycenaean entrance passage.

⁶² The arguments in favour of a later integration of the entrance into the originally closed circle, as argued by Gates (1985, 270 and Laffineur (1990, 202–3), are not convincing in my opinion.

in the middle of the 13th century BC, was still aware of the importance of these graves, which belonged to rulers who had died more than three hundred years previously. Probably they were seen as the founding dynasty of the citadel and maybe they suited the new aristocracy to claim an ancestral lineage from this first ruler class – whether true or fictional. Beyond this obvious prestigious function of the new Grave Circle A, it is also possible that some kind of ancestral cult had already developed prior to the LH III B renovations.⁶³

Though the function of ancestors as semi-divine protectors of the city must remain an unprovable hypothesis for the Bronze Age, the general existence of tutelary deities or symbolic conceptions serving the protection of citadel gates can be deduced on the basis of other findings at least for the Late Mycenaean age.

Concerning this matter I will only briefly refer to the already mentioned Lion Gate, which – as is well known from several studies – was furnished with a number of technical installations for physical protection. The relief above the lintel (Fig. 11) has no such fortificational purpose, but is rather rich with complex figurative meaning. Most of the different interpretations of its iconography at least agree on the general assumption that the lions are to be understood as symbolic guardians of the citadel which is in turn emblemized by the pillar and the altars. The apotropaic value though is not as clear as in the contemporary Near Eastern gate sculptures set at foot level, baring their teeth and always shown face to face with the visitor. The heads of the Mycenaean lions are indeed missing but can be reconstructed in analogy to a well-known and widespread Aegean motive with a long tradition, showing the heads in profile and with a rather benevolent expression.⁶⁴ Thus the protective, not the awesome aspect of the lions seems to have been emphasized in case of the Mycenaean gate relief.



Fig. 11 Lion Gate relief above the main entrance to the citadel of Mycenae, seen from the north-west (Photo: Author).

By placing this emblem above the main gate⁶⁵ and also by setting the main gate next to the newly constructed Grave Circle A, the Late Mycenaean dynasty could not only point to the long history and grandeur of the city, but could also contribute to the protection of the gate and the city on a symbolic level, supplementing the constructional devices for safe-keeping.

⁶³ The archaeological finds are not totally clear on this point. The cylindrical structure immediately above shaft grave VI was interpreted as an altar for libations, either used only during the funeral practices or repeatedly afterwards, on annual commemoration rituals or in the context of an ancestral cult. In addition to this altar a rocky outcrop between shaft Graves VI and I contained a great amount of ash, bones, figurines and pottery, mostly kylikes. These items, dating between LH I and LH III B, can either be interpreted as the remains of deposits and ritual meals in honour of the dead, made over a long period of time, or as a coincidental accumulation within the earth filling heaped up in LH III B, when the grave circle was renovated. On these structures, see Keramopoulos 1918, 52–60; Karo 1930, 333; Schliemann 1964, 246–7; Wace 1923, 103–5, 112–13, 121–2; Wace 1949, 61–2; Mylonas 1957, 112–14, 119–21; Andronikos 1968, W 128; Schnauffer 1970, 14–15; Mylonas, 1983, 42–3; Iakovidis 1983, 39; Gates 1985, 267–8; Tzonou-Herbst 2002, 104–5, 260, 262.

⁶⁴ The so called Lion Gate motive is to be found on many seals and seal impressions throughout the whole Aegean world and over a long period of time, with the earliest examples originating in Neopalatial Crete.

⁶⁵ The composition is placed on a slender limestone block fitting into the relieving triangle above the lintel. This technique is derived from the older tradition of constructing stomia of tholos tombs which in LH II developed from the older shaft grave type.

Conclusions

The integration and rebuilding of the LH I Grave Circle A into the LH III B fortification circuit at Mycenae close to the Lion Gate has long been identified as an intentional and clever move by the Late Mycenaean ruling elite: by creating a memorial for the local ancestors that were probably considered the founders of the citadel, matters of both dynastical and communal concerns were handled at one stroke: the reputation as legitimate rulers was affirmed and the townscape was enriched with a representative monument in a prominent position at the main gate, serving the prestige, and maybe also the safety of the city.

As I pointed out in this paper such architectural and ideological concepts are not totally new but rather derived from a long indigenous tradition, born at the very eve of the Early Mycenaean culture.

At the end of the MH age a considerable population growth accompanied by the need for new living space can be traced in many settlements on the Greek mainland and the adjacent islands, as well as an obvious demand for fortifications (maybe due to a growing rivalry among the rising Early Mycenaean kingdoms). The city gates belonging to these fortifications are sometimes accompanied by roughly contemporary tombs, standing on the outside (Aigina, Ayia Irini, Pylos) or the inside (Peristeria) of the gateway. With the exception of Ayia Irini, these are single and isolated tombs, not being part of a cemetery area outside the citadel. Moreover they are characterized by rich grave goods and/or an elaborate grave architecture (shaft graves or tholos tombs), reflecting the burial practices of social elites. Their position at the city gate and their covering with monumental superstructures above ground are two characteristics that clearly show that the purpose of these monuments went far beyond their function as grave markers: they were meant to be seen by anyone entering the settlement, in order to display the prosperity of the city and to commemorate the achievements of those buried beneath. Probably in most cases the occupants were important local rulers who contributed to the welfare of the city, maybe by being responsible for the building of the fortification walls.

A related phenomenon can be seen in Malthi, where the main gate of the late MH fortification wall was placed next to an already existing nucleus of three pit-graves, which are the oldest on the site (early MH) and the only ones crowned by an elliptical stone circle. As there are also indications of cult activity at these graves and the adjacent building, they could belong to the founders of the citadel who were still remembered and even venerated at the time the fortifications were built generations later. The best parallel to this situation is indeed the much later development at Mycenae.

With the exception of the tholos tomb at Pylos all the other mentioned tombs at the city gates were subsequently provided with enclosing stone structures – a rectangular ‘tower’ in Aigina and grave circles (built of rubblestone walls or double rows of vertical stone slabs) in Ayia Irini, Peristeria, Pylos and Mycenae. The ideological concept behind these periboloi is similar to the concept behind fortifications: to protect the space inside.⁶⁶ Thus it seems to have been vital for the Early Mycenaean people to protect not only the places of the living but also the places of the dead, especially those who were important for the local community.

Such reverence for ancestors in some cases – and this is not confined to the graves at city gates – led to the development of ancestral or hero cults, documented by the widespread tradition of placing ritual deposits at Mycenaean tholos and chamber tombs, a tradition that survived well into the dark ages. By offering food, drinks and other items to the deceased they were kept in a good mood and thus posed no threat to the living. This was especially important for the tombs at the city gates, the weak points of every fortification. It is perfectly possible that already in Mycenaean times people believed in contributing to the safety of the city by stimulating the apotropaic abilities of the deceased ancestors – a popular belief not only in Classical times, when hero cults at city gates were well known in the Greek world, but also in the ancient Near East, where kingly tombs, cenotaphs or ancestral monuments equipped with places for offerings were frequently associated with palace portals in the early Iron Ages.⁶⁷

⁶⁶ This analogy was already noticed by Müller Celka 2011, 424.

⁶⁷ At Karkemish and Sam'al (Zincirli) monumental sculptures of deceased rulers were placed at palace portals while cup marks on the surface of their bases functioned as places for offering – a tradition that can be traced back to the late Bronze Age Hittite capital Hattuša, where cup marks close to gate sculptures (according to Hittite ritual texts) most probably had the same function. In Iron Age Tell Halaf and already in late Bronze Age Qatna, kingly burial crypts equipped with monumental sculptures and places for offering were situated at the entrance to or within the palace fortifications.

Abbreviations and Bibliography

EH	Early Helladic
MC	Middle Cycladic
MM	Middle Minoan
MH	Middle Helladic
LH	Late Helladic

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THE FORTIFICATIONS OF ARCHAIC ROME: SOCIAL AND POLITICAL SIGNIFICANCE

Gabriele Cifani

Abstract

This paper discusses the political meaning of the fortification of Rome in parallel with the social and urban transformations which took place in central Tyrrhenian Italy in the 6th century BC.

The city of Rome in the course of the 6th century BC was already one of the largest settlements in the central Mediterranean area, which makes this site one of the most advanced experiments in Archaic urban fortification. The paper focuses on the relationship between the fortifications and the evolution of settlement and contextualizes the evolution of the city walls in Rome with the social and political background of its community.

‘Men make the city not walls’: the famous words by Nicias as reported by Thucydides (VII.77.7) point out the social and political essence of any public building in a community. The way in which a city defines and defends its borders reveals its inner social structure, the level of technology, the economy, the interaction with the physical landscape; last but not least, it is also an expression of the way of doing war, which is, according to Karl von Clausewitz, ‘nothing but the continuation of politics by other means’.¹

Within such a framework we can also approach the evidence of the fortifications of early Rome.

The physical region of Italy where we find the largest fortifications since the Bronze Age is central Tyrrhenian Italy, corresponding to Southern Etruria and ancient Latium (the so-called *Latium adiectum*). This area is

characterized by the presence of huge flat volcanic tufa hills with vertical cliffs, which create a landscape of naturally fortified areas divided by rivers and deep canyons.²

The nature of this landscape dictated the diffusion of nucleated settlements in the whole area since the Late Bronze Age: to fortify a settlement it was enough to keep the slope of a plateau clean and to place a ditch with an earthwork on the only side of the settlement which was open on the landward side.³ Usually the earthworks were made only of clay and lumps of tufa, but in the Final Bronze Age and Early Iron Age earthwork of Colle Rotondo, near Anzio, we find a sand earthwork internally reinforced by transverse cross beams.⁴

We have no direct data on the Bronze Age fortifications at the site of Rome, but we can observe that the Final

¹ Howard & Paret 1984, 69.

² Funicello 1995 with bibliography.

³ For a review of the Bronze Age fortified settlements in central Tyrrhenian Italy: Barbaro 2010 (Southern Etruria) and Alessandri 2013 (Latium).

⁴ About the Latin settlement of Colle Rotondo (Anzio): Cifani *et al.* 2013 with bibliography.

Bronze Age community which inhabited this area was mainly located on the naturally fortified Palatine and Capitoline Hills, controlling the nearby ford on the Tiber.⁵

This situation is drastically modified during the Iron Age (i.e. 9th–8th centuries BC), when we have further evidence of settlement on the Capitoline, Palatine and Quirinal Hills and also on the Velia, and of the gradual moving of the cemetery from the Forum Valley to the Esquiline Hill. As pointed out in 1959 by the influential German archaeologist Hermann Müller Karpe, after a phase characterized by different villages with their respective cemeteries, during the Iron Age the displacement of the Forum necropolis on the Esquiline Hill coincided with the definitive formation of a unitary centre, the size of which is about 150 hectares.⁶ This change occurs in parallel with the presence of already established huge fortified settlements in southern Etruria such as Veii, Caere, Tarquinii and Vulci, which started around the beginning of the 9th century BC.⁷ All these Early Iron Age communities are characterized by their huge size (i.e. more than 100 hectares) and for being located on naturally defended areas, mainly tufa plateaus. During this phase, the fortifications of Rome can be only surmised from the location of the Esquiline necropolis, which reveals an urban border, probably defined by an earthwork, correlating to the vertical slopes of the Quirinal, Capitoline, Palatine and southern Esquiline. In addition, we can include further works of terracing or fencing along the eastern slope of the Capitoline Hill and along the northern slopes of the Palatine. Along the Capitoline Hill, a segment of a wall, which dates to the end of the 8th century BC and was later rebuilt in the Archaic period, has recently been discovered near the Carcer.⁸

On the northern Palatine slopes a segment of a wall about 11 metres long has been stratigraphically excavated. This wall was rebuilt three times between the second half of the 8th and the first half of the 6th century BC, and it

may derive from an inner line of fortification or fencing around the Palatine, the largest and the most strategic of the seven hills of Rome.⁹

The establishment of a huge unified settlement in Rome during the course of the 8th century BC is accompanied by the development of a series of strongholds at the most strategic crossroads of the lower Tiberine valley, such as Ficana, Decima, Laurentina, La Rustica, Antemnae and Fidenae.¹⁰

The rise of the city of Rome is accompanied by the reorganization of the nearby territory which was controlled by means of small communities settled on naturally fortified sites of about 2–16 hectares, located along the borders.

Some elements of the ideology of the elite of such communities can be reconstructed from the luxury burials of the 8th-century tombs found at Decima or Laurentina, but also in Rome during the course of the 8th century we have funerary tomb groups which reveal the self-representation of the elite as warriors, as shown by the Esquiline tomb 94, which had a chariot, a bronze helmet, spears and a rich pottery set.¹¹

The urban transformation

By the end of the 7th century the rise of urbanization had led to a dramatic increase in building activity in Rome. Within a few decades there was a transformation from a building technique consisting of mud bricks and thatched roofs into a new architecture of squared stones, tiled roofs and monumental buildings.¹² This transformation, which has been often summed up by the phrase ‘from huts to houses’,¹³ implies several transformations of the economy: concentration of manpower, further craft specialization and conceptual improvements such as

⁵ Alessandri 2013, 369–90 with bibliography; Fulminante 2014.

⁶ Müller-Karpe 1959; 1962, 61; Peroni 1960; Alessandri 2013, 369–90 with bibliography.

⁷ Pacciarelli 2000 with bibliography; Early Iron Age fortifications: Moretti Sgubini 2008, 171 (Vulci); Boitani 2008, 139 (Veii).

⁸ Fortini 2000; 2001.

⁹ Carandini & Carafa 2000, 139–60, 161–74, 181–9.

¹⁰ Alessandri 2013, 53–79 with bibliography; about the fortifications of Fidenae: Amoroso *et al.* 2005, 312–15; Amoroso & di Gennaro 2014; for a definition of the possible boundaries of the *ager romanus antiquus*: Colonna 1991; Cifani 2005 with bibliography; About Gabii: Helas 2013.

¹¹ The complex is dated to the Latial phase III A: Lanciani 1884, 346; Pinza 1905, 144–9; Bettelli 1997, 145 with bibliography. On the funerary ideology of the Latin elites between the 8th and the 7th century BC: Bietti Sestieri 1992; Waarsenburg 1995; Fulminante 2003 with bibliography.

¹² Cifani 2008 with bibliography; 2014.

¹³ Holloway 1994, 51–67.

standardization and modularity in building activity and also in the management of resources such as timber and stones.

In addition, during the course of the 6th century, impressive public building programmes took place in the city of Rome: the urban fortifications, the drainage and filling of marsh areas inside the walls and the construction of monumental temples, among them the temple of Jupiter Capitolinus, the largest sanctuary in central Tyrrhenian Italy.¹⁴

The social context

This phenomenon occurs in parallel with a change in funerary practice: from the beginning of the 6th century onwards (in terms of cultural phases, from the advanced Latial Phase IVB), graves became very poor, almost without objects and with a very austere funerary architecture.

A realistic interpretation proposed by Giovanni Colonna is that the aristocratic surplus was diverted from private consumption of prestige luxuries to expenditure in public contexts, particularly on sanctuaries, temples and public works.¹⁵ This phenomenon took place in Rome and in the main cities of ancient Latium and it also seems to influence the nearby Etruscan community of Veii.¹⁶ As rightly pointed out by Tim Cornell, the public orientation of patterns of elite expenditure, with the appearance of sacred and secular buildings, can be seen as a further symptom of the rise (or better of the consolidation) of the state.¹⁷ As a matter of fact, this change had deep implications also for the ways in which luxury objects, above all metals, were hoarded: from private funerary deposits to public votive contexts, which appear now as related to monumental stone-built temples and sanctuaries, under the control of public authorities.¹⁸

The new fortifications

Around the second half of the 6th century a new circuit of urban fortification was built.

The new fortifications had a perimeter of 11 km which makes Rome one of the largest fortified settlements in the Archaic Mediterranean, and they enclosed an area of about 365 ha, corresponding to the traditional seven hills; during this phase the city also included the Aventine and the northern area of the Esquiline (Figs 1–2).¹⁹

The topography of the Archaic Roman walls has been fully described and discussed in the works of eminent scholars since the 19th century.²⁰ Here it is stressed that once again the Archaic city walls took advantage of the local geomorphology, by using firstly the natural defences already offered by the vertical slope of the tufa plateau, which were possibly improved by means of rock-cut and squared stone walls built on the tops of the hills. On the north-western side of the city, where the Esquiline plateau was linked to the hinterland and for this reason was particularly vulnerable, the most expensive fortification work was constructed, by means of a ditch and an earth rampart faced by a squared stone wall, the well-known *Esquilinus agger*.

To summarize, the new fortifications included:

1. vertical cuts on the slopes of the tufa hills;
2. raised and regularized edges of the hills by means of earthworks and retaining walls;
3. ditch and earthworks (e.g. *Esquiline agger*);
4. walls possibly reinforced by internal earthworks and ditches in the bottom valley areas;
5. gateways possibly supplemented by towers (e.g. the *Porta Collina*);
6. pathways on the tops of the walls;
7. various complementary works, e.g. outside pathways or roads parallel to the fortification line, internal retaining walls of the earthworks, drainage ways and wooden bridges across the ditches;

¹⁴ Forum Valley: Ammermann 1990; 1996; Ammermann & Filippi 2004; Palatine northern slope: Carandini & Carafa 2000, 208; Colosseum Valley: Panella 1990. Comparisons with Etruscan and Latin cities: Cifani 2008, 308–13; 2012b, with bibliography.

¹⁵ Colonna 1977 and also: Bartoloni 1987; Bartoloni *et al.* 2009 with bibliography; Palmieri 2009.

¹⁶ Drago Troccoli 1997, 268–78 with bibliography.

¹⁷ Cornell 1995, 105–8.

¹⁸ Nijboer 2001, 40–3.

¹⁹ Cifani 1998; 2008, 45–73, 255–64.

²⁰ E.g. Nibby 1821; Lanciani 1871; Parker 1874; Säflund 1932; Lugli 1933; more recently: Coarelli 1995; Andreussi 1996; Battaglini 2004, 2006; Barbera & Magnani Cianetti 2008.



Fig. 1 Rome, Archaic walls.

8. inside respect area around the walls to move the troops;
9. outside respect area in order to optimize the view from the top of the walls and to deprive attackers of covered positions.

The chronology of these walls has been fully debated in the scholarship of recent decades. The main evidence for

the chronology of the walls includes stratigraphic and topographic data, information about building techniques, literary tradition and comparative material. On the Quirinal Hill, a layer accumulated the Archaic walls was dug last century; the archaeologist found a fragment of Attic red-figured pottery, dated by Sir John Beazley to the end of the 6th century BC.²¹ In 1999, as a result of modern building activity in the area beneath the Stazione

²¹ Gjerstad 1960, 40, note 3.

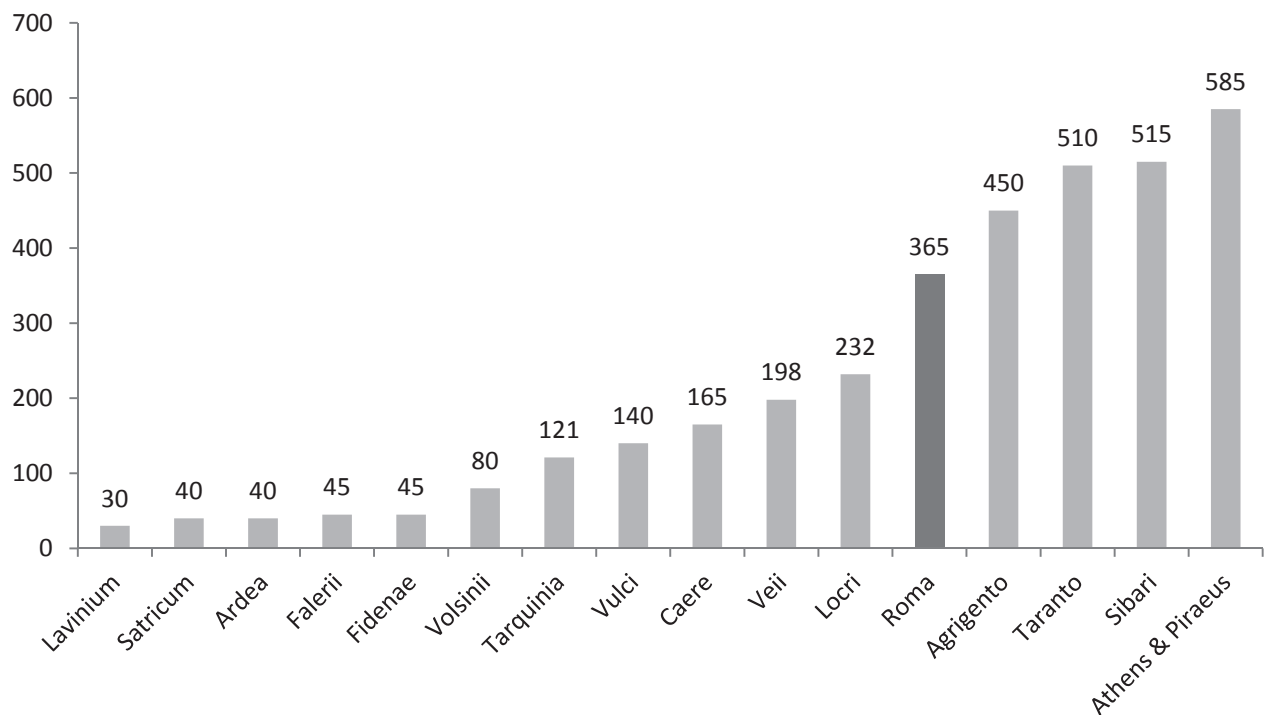


Fig. 2 Histogram of Archaic fortified cities, by size in hectares (after Cifani 2008).

Termini, a small segment of the Archaic *agger* was found and few weeks later demolished; the archaeologists recorded the presence of Archaic pottery in the earth fill of the walls.²² In two other cases archaeologists recorded the presence of an artificial layer of earth beneath the foundation of the wall on the Quirinal and Esquiline; this layer was also filled with fragments of *bucchero*, the typical pottery used in Rome and Etruria between the 7th and 5th centuries BC.²³

There is also another important element to date the walls: the topographical distribution of the Archaic cemeteries. It is well known that Roman law did not allow intra-mural burials,²⁴ and on the Esquiline Hill, where the most important early Roman cemetery was found, the tombs dated to the Archaic periods are always outside the walls, whereas the tombs of previous phases are

dislocated in areas inside and outside the future Archaic walls²⁵ (Figs 3–4).

The Archaic fortification is characterized by grey granular squared tufa blocks. This kind of tufa was used for public buildings mainly in the Archaic phase as shown for instance by the podium of the temple of Jupiter Capitolinus or by the podium of the temple of Dioscuri. A further element of chronology is offered by the system of measurement adopted for cutting the majority of the Archaic walls' blocks: the so called Italic foot (27.2 cm), which was used mainly in the 6th and 5th centuries BC.²⁶

Consideration to the whole corpus of literary tradition about Archaic Rome, which is very coherent regarding the presence of walls around the city when recounting events associated with the late regal period or the

²² Filippa & Sbarra 2001; see also Säflund 1932, 152–4 with bibliography.

²³ Cifani 2008, 70–1.

²⁴ E.g. Lex XII tab.: 10.1: *hominem mortuum in urbe ne sepelito neve urito*; for a discussion about the exceptions to this rule: Gusberti 2008; Gallone 2008; Guidi 2008 with bibliography.

²⁵ Colonna 1977 (the paper also includes a critical review of some previous hypotheses about the possible evidence of isolated Archaic or mid-Republican tombs inside the city walls); Colonna 1996, 338; Bartoloni 1987, 152–5.

²⁶ Cifani 2008, 221–2, 239–40.

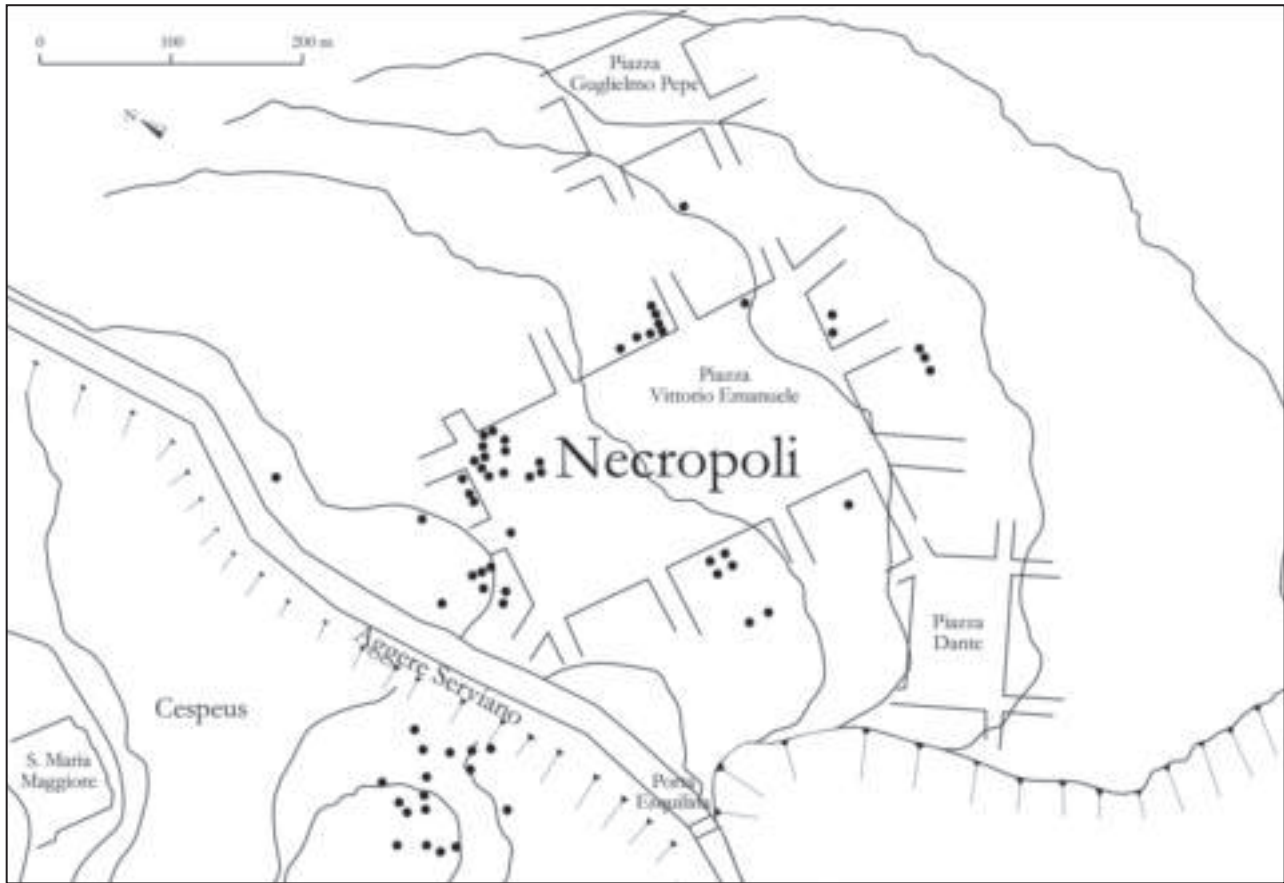


Fig. 3 The Esquiline necropolis between the 8th and the 6th centuries BC (after Bartoloni 1987).

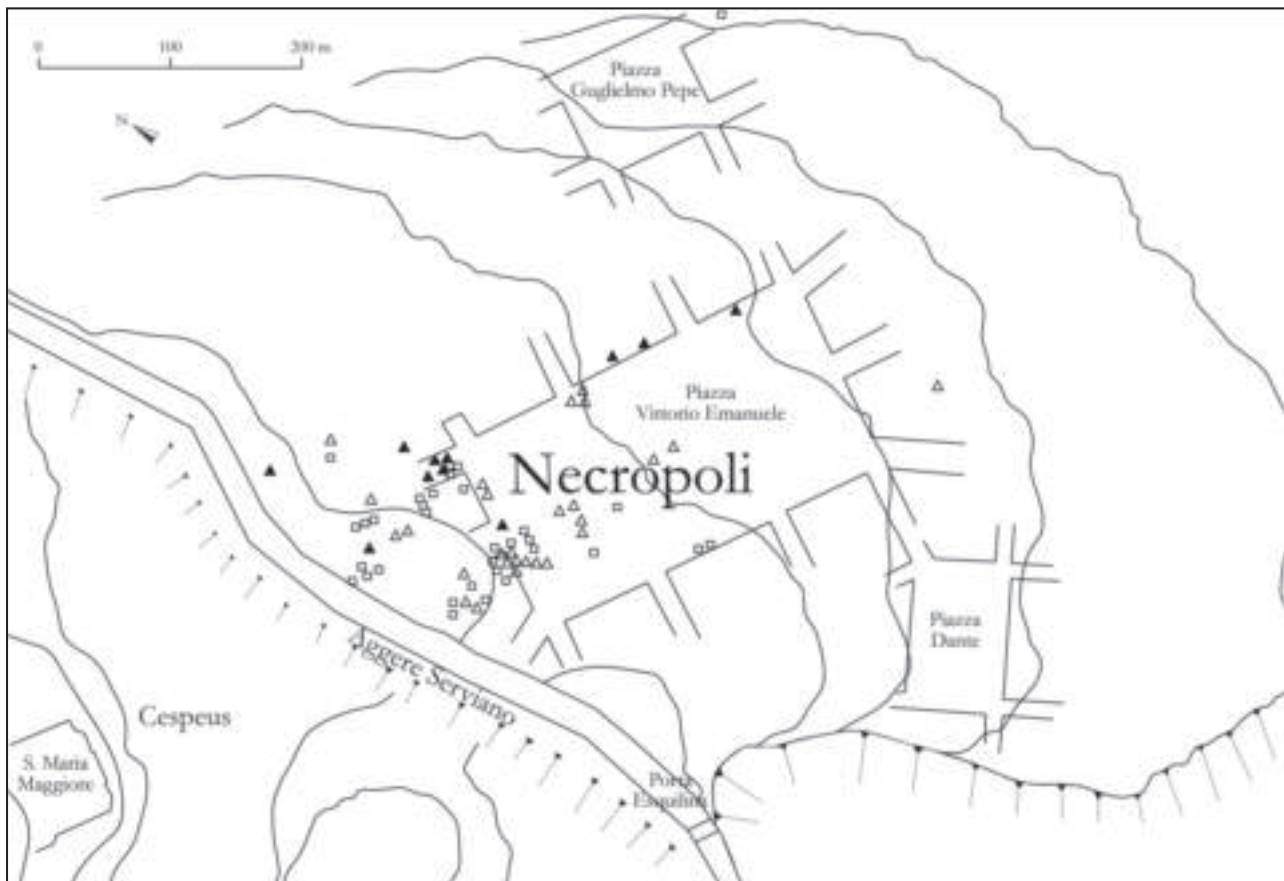


Fig. 4 The Esquiline necropolis between the 6th and the 4th centuries BC (after Bartoloni 1987).

Early Republic, could be a further element to date the walls.²⁷

Urban comparisons with the nearby Etruscan and Latin settlements show that all the cities had rings of walled fortifications in the Archaic period.²⁸ If Archaic Rome was without city walls, it should mean that she was already strong enough to survive without fortifications, exactly like the contemporary city of Sparta, which had the best army in the whole of Greece,²⁹ or rather like Rome in the early imperial phase, when the city lived without urban fortifications for almost three centuries.

The view that Archaic Rome was unable to build a fortification of 11 km and only fortified the individual hills³⁰ must be rejected for a number of simple reasons:

1. There is clear evidence of grey granular tufa squared blocks composing fortifications in between the individual hills and in the low-lying areas or valleys, as exemplified by the walls found between the Forum Boarium and the Aventine (near the basilica of St Maria in Cosmedin)³¹ and along the southern slope of the Quirinal (Salita del Grillo),³²
2. On the contrary, there is no evidence of fortification works along the inner slopes of the seven hills;
3. Some very important public areas of the city located

in the valley bottoms, for instance the Forum, would have been left undefended;

4. Last but not least because, ironically, the sum of the length of the fortifications of each hill would have been at least twice the length of the so-called 'Servian walls'.

Obviously some hills, with their retaining walls around the sharp slopes, could also have functioned as single fortifications, as is possible in the case of the Capitoline Hill during the Gallic sack of 390 BC,³³ but this does not imply that the defensive system of the city in the Archaic phase was based on the single hills.

City walls: economy and politics

The realization of the new fortifications was probably the result of a long-term project. To have a vague idea of the manpower required for the execution of the walls we can analyse the Esquiline *agger*: it was 40 metres in width and 12 metres high, forming a barrier at least 1100 metres in length (Fig. 5). This means that the earthwork was about 286,000 m³ (excluding the tufa blocks of the façades), which is the equivalent of about 171,600 working days, or almost two years, with 300 men digging on the site.³⁴

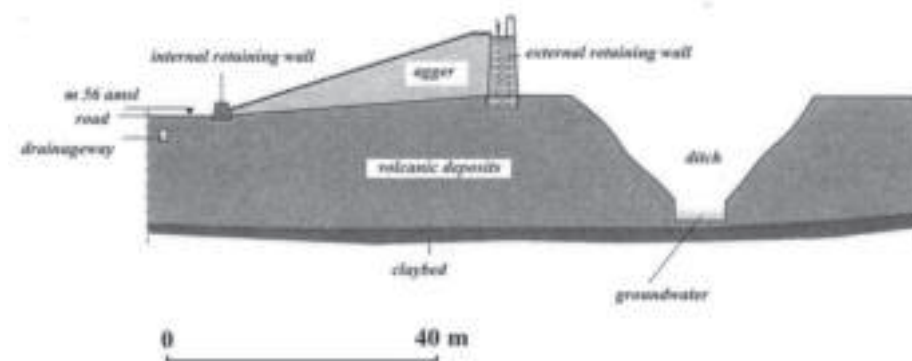


Fig. 5 Section of the Esquilinus *agger* in the 4th century BC (after Cifani 2012a).

²⁷ E.g. Cic. *De Rep.*, 2.6.11; Liv. 1.36.1; 1.44.3; Dion. Hal. 3.67.4; 9.68.3; Strab. *Geogr.*, 5.3.7; Plin. *HN*, 3.5. 66–7; Liv. 2.11.3; 2, 51, 1–3; 2.64.3; Dion. Hal. 9, 24.4; for a systematic review: Begni 1952. For a synthesis of the debate about the value of literary sources and early Roman history: Cornell 2005 with bibliography.

²⁸ Latium: Guitoli 1984; Quilici 1994; Etruria: Colonna 1986, 496–502; Fontaine 2002 with bibliography; Chianciano Acts 2008; about Tarquinii: Bonghi Jovino 2010 with bibliography; about Caere: Bellelli 2014 with bibliography. For a catalogue of the fortified pre-Roman sites of the middle Tiber Valley: Cifani 2003 with bibliography.

²⁹ For a list of the fortified Greek cities: Hansen & Nielsen 2004, 135–43; for a catalogue of the Archaic Greek fortifications: Frederiksen 2011.

³⁰ Säfllund 1932, 164–7; Bernard 2012, 37–8.

³¹ Lanciani 1886, 274; Cifani 2008, 61, n. 12 with bibliography.

³² Lugli 1933, 22, n. 4; Cifani 2008, 63–6, n. 15 with bibliography.

³³ For a discussion of the archaeological evidence for the walls and fortifications of the Capitoline Hill: Mazzei 1998; Fabbri 2008 with bibliography; about the literary and archaeological evidence regarding the Gallic sack (mainly in the area of Forum Caesaris): Delfino 2009, 2014 with bibliography.

³⁴ Cifani 2010 with bibliography.

The source of manpower for building the Archaic city walls is probably to be found among the lower classes of the population of the city itself, in terms of *corvée*, but we can also consider the tribute from some of the surrounding Latin cities. The rapid growth of public building activity required huge manpower which could have been available only by imposing tribute on external communities. The literary sources, above all Livy and Dionysius, describe *corvée* with the term '*munia*',³⁵ above all for the public building of Tarquinius the Proud,³⁶ but they also link the building of each Archaic temple to military victories and war booties.

War booty probably included not only precious objects or cattle, but also manpower represented by prisoners of war or by the inhabitants of a conquered enemy city, who could have been temporarily employed as forced manpower, above all for works which required unskilled labour forces, such as digging and quarrying. These are activities which can be included in the generic definition of *ad metalla* work, a kind of sentence the invention of which is attributed by literary tradition to Tarquinius the Proud.³⁷ In addition, literary sources for the Greek world describe many episodes of the use of prisoners of war for public building plans: we can recall above all the use of Carthaginian prisoners, taken at the battle of Himera of 480 BC by the tyrant Theron, as a labour force for the building programmes at Agrigentum.³⁸

But what could have been the reasons for investing such huge resources in building new fortifications? There are at least two political aims in building new city walls. The first one is the more obvious: to reinforce and enlarge the city against external enemies. A second reason can be linked to internal politics and social struggle: the aim of the community, led by kings, to reinforce the authority of public institutions by concentrating huge amounts of manpower in public building plans and to emphasize the role of a 'regular', public army against the power of aristocratic groups. The political meaning of the city walls was clearly stated by Aristotle: 'As to fortified positions, what is expedient is not the same for

all forms of constitution alike; for example, a citadel-hill is suitable for oligarchy and monarchy, and a level site for democracy; neither is favourable to an aristocracy, but rather several strong positions'.³⁹

For these reasons the literary tradition on the Servian city walls can be considered as coherent with the tradition on his military reforms,⁴⁰ but it also finds parallels in the significant disappearance of warriors' and elite tombs in the course of the 6th century as evidence of the new rules on austerity and isonomy imposed on the elite of the city.⁴¹

The line of the fortification of Archaic Rome survived until the late Republic, but many sectors of the walls were heavily restored or rebuilt in the 4th century BC. This restoration is clearly visible along the external side of the Esquiline *agger*, which is retained by a wall of yellowish lithoid tufa squared blocks, while the internal side was still retained by the original Archaic wall (Figs 6–7).⁴² Another context where the mid-Republican restoration is very clear is on the Aventine, near the Basilica of St Sabina, where we find a segment wall composed of grey granular squared tufa blocks which was restored by means of yellowish lithoid tufa blocks.⁴³



Fig. 6 The yellowish lithoid tufa squared block of the mid-Republican phase of the Esquilinus *agger* (author's photo 2011).

³⁵ The word *munia* is linked with *moenia*, according to Fest. 137 L; Varr. LL 5, 141.

³⁶ Cassius Hemina fr. 15 P; Liv. I.59.9; Dion. Hal. IV.44.

³⁷ Ioh. Antioch., fr. 36 (ed. Müll.); Ioh. Lid., *de mens.*, 4. 24; Suida, s.v. *Souperbos*; Isid. *Orig.* 5. 27. 23; see also: Milazzo 1993 with bibliography.

³⁸ Diod. Sic. 11, 25, 2–4.

³⁹ Aristotle, *Politics* 7.1330 b; translation by Rackham 1932; see also the memory of the Turrus Mamalia in the *Subura* (Festus 131; 178; *CIL* VI, 33837 = *ILS* 7242), probably an aristocratic fortified building inside the city before the Servian reform.

⁴⁰ Ampolo 1988; Cornell 1995, 173–97; Clerici 2009; 2010 with bibliography.

⁴¹ About the aristocratic clans and gentilician institutions between the 6th and 5th centuries: Smith 2006 with bibliography.

⁴² Cifani 2008, 223–4; Panei & Dell'Orso 2008; Volpe 2014 with bibliography.

⁴³ Quoniam 1947; Cifani 2008, 59–61.



Fig. 7 The internal retaining wall of the Esquilinus *agger*: rescue excavations at Stazione Termini, 1948 (after Cifani 2008).

The reason for adopting this material, which is much harder than the grey granular tufa of the previous Archaic phase, is linked not only to its ready availability after the conquest of the territory of Veii, but also to its greater suitability in resisting artillery strike. Fourth-century military history is characterized by the introduction of the use of catapults and other machines to besiege fortifications, as in the case of the conquest of the Punic city of Motia in Sicily planned by the Syracusan tyrant Dionysius I in 397 BC.⁴⁴ The development of technologies and war strategies is also shown by specific works on this topic written by Democritus of Abdera and Aeneas Tacticus in the course of the century, which mark the beginning of poliorcetics in the ancient Greek world.⁴⁵

Within such a framework we could understand the reasons behind the massive restorations of some of the most vulnerable sectors of the city walls in 4th-century BC Rome, and their update with the new strategies of siege warfare. However, the circuit of the Archaic city walls survived until the 1st century BC and some of the Archaic city walls were also transformed into monumental arches, such as the Porta Esquilina or the Porta Coelimontana.⁴⁶ The whole complex of the fortification represented one of the landmarks of the collective memory which linked the Roman community not only to the events of the late regal period, but also to the shaping of the authority of the *res publica*.

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⁴⁴ Diod. Sic. 14.42.1; 14. 50. 4; see also: Garlan 1974, Sáez Abad 2005, Rihll 2007 with bibliography.

⁴⁵ Bettalli 1998; Loreto 1995; Hellmann 2010, 317–42 with bibliography.

⁴⁶ Cifani 2012a, with bibliography.

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FORTIFICATIONS OF CENTRAL ANATOLIA IN THE EARLY FIRST MILLENNIUM BC

Baptiste Vergnaud

Abstract

This article focuses on Iron Age fortifications in Central Anatolia. Study of the sites from Central Phrygia and from the “Halys bend”, including Gordion, Boğazköy and Kerkenes, shows that between the tenth and sixth centuries BC, defensive architecture responded to certain principles partly inherited from Hittite architectural practice. The construction techniques and fortification methods used in the sites reflect the persistence of the Anatolian architectural tradition but also testify to the builders’ ability to adapt it. The dating evidence gathered in this study enables us to propose that the period between the mid-seventh and the mid-sixth centuries BC is a turning point in the defensive practice which is characterized by the emergence of larger and more sophisticated fortification walls. This phenomenon is also observed in Western Anatolia where large *enceintes* were built in Sardis and in Phokaia. In addition to the technical considerations that allow comparisons between these sites and those of Central Anatolia, it appears that both regions were subjected to a similar urban development in which fortifications played a key role.

Introduction

In the period between the tenth and sixth centuries BC, Central Anatolia was occupied by several communities which often lived and evolved within Bronze Age settlements. They progressively reached a level of organization which allowed them to turn their settlements into cities. Together with houses and workshops, fortifications are good indicators of this urban renaissance in the aftermath of the disintegration of the Hittite empire. Fortified settlements were distributed across three main regions: Phrygia, the Halys bend and Cappadocia (Fig. 1). These sites vary greatly in size but also in significance. There is indeed

a significant difference between Gordion, the capital of the Phrygian kingdom and Boğazköy, where a small community slowly grew on top of the Hittite ruins. The fortifications testify to this diversity but they also share common traits in planning and architecture, which reveal various influences. The main aim of this article is to identify the elements that could help in defining Iron Age military architecture in Central Anatolia. This will allow us to shed light on certain factors at play in the emergence of fortifications in Central Anatolia in the early first millennium BC, including the perpetuation of the Anatolian building tradition. Finally, this article discusses the importance of this tradition in relation to Western Anatolian fortifications and considers the

* I would like to thank Naomi Carless Unwin and Jesper Blid for their suggestions. The author is responsible for all remaining mistakes. I also thank Geoffrey Summers for the photographs of Kerkenes (Figs 6 and 8–9).



Fig. 1 Map of Anatolia (author's map).

eventuality of a common development in military architecture between the two regions under study.¹

The Sites

Gordion holds a prominent place in the Anatolian archaeological landscape, not only because it was the capital of the Phrygian Kingdom but because it is one of the rare sites in the region to have been extensively investigated. The citadel has been fortified three times and new discoveries have shown that the city was equipped with two other fortification walls which

enclosed what the excavators define as the lower town and the outer town.

The first fortification phase on the citadel (YHSS 6B) is dated to the late tenth or early ninth century BC.² We know very little about its plan but entrance to the fortification was made through the court of a structure known as the Polychrome House. Sculptured orthostate blocks found in its proximity must have adorned its walls.³

The second phase gate was built in the ninth century BC (YHSS 6A) (Figs 2 and 7.1). The gate consisted of an oblique passageway flanked by two large buildings. The

¹ The results presented here are from my doctoral dissertation defended in June 2012 at Bordeaux 3 University under the title: *Recherches sur les fortifications en Anatolie occidentale et centrale au début du premier millénaire av. J.-C. (Xe-VIe s.)*.

² de Vries 1987, 5–11; 1990, 371–406; Sams 1994; Voigt 2007, 312; Rose & Darbyshire 2011, 26 fig. 2.1.

³ Sams 1989; 447–54; Voigt 2005, 29.

Fig. 2 Gordion. Citadel Gate. YHSS 6A (author's photograph).



walls were constructed of small rectangular blocks and slanted inwards. This gate may have been accessible via an oblique ramp since the remains of a structure, which may be identified as a tower, were found in front of the entrance.⁴ The building was destroyed around 830–800 BC in a fire that remains unexplained.⁵ The third-phase gate was built shortly after this disaster and the previous gate was completely filled. The new gate plan was symmetrical. The passageway was straight and again flanked by two large courts of megaron plan. A stepped terrace wall acting as a glacis was built in front of the gate (Figs 3 and 7.2).⁶ In the Middle Phrygian period (YHSS 5), sometime between the end of the seventh and the first half of the sixth century BC, a massive city wall was built to enclose the lower town.⁷ A fortress crowned Küçük Höyük, situated in the south part of the site, facing the entrance of the citadel. This fortress seems to have had a counterpart on Kuş Tepe further north. The mudbrick walls that connected these two points were equipped with towers built at regular intervals.⁸ Finally, at some unknown time, an earth rampart would have been built to protect the outer town which had developed to the north-west of the citadel.⁹



Fig. 3 Gordion. Glacis in front of the citadel. YHSS 5 (author's photograph).

Gordion is often cited in archaeological literature in relation with Iron Age architecture and this site is

⁴ Young 1956, 260, pl. 87 fig. 25; 1962, 156–8 and pl. 43 fig. 8.

⁵ de Vries *et al.* 2003 ; Voigt 2005, 28–31.

⁶ Young 1956, pl. 83–84.

⁷ Edwards 1959, 24; Young 1957, 324; 1958, 140–1; Voigt *et al.* 1997, 6–8; Voigt & Young 1999, 211–5.

⁸ Recent prospections were able to highlight the traces of this wall. See Sams 2009, 139–150 and Sams & Rose 2011, 501–14.

⁹ Voigt 2011, 1070. See also Rose & Sams, *The Friends of Gordion Newsletter* (September 2011, 3). The outer town wall is only known through magnetic prospection.

naturally a milestone in that research field. However, an overview of the surrounding sites shows that building activity was not confined to Gordion in that period.

Three other fortified sites have been discovered in Central Phrygia and dated to the Phrygian period. These are Yenidoğan, Gâvurkalesi and Çevre Kale (Yaraşlı).¹⁰ They are relatively close to Gordion, the farthest being Çevre Kale located 100 km south-eastward from the capital.

The dating of these fortification walls is still very uncertain. Yenidoğan is considered to be a new foundation from the Phrygian period. Its occupation is dated to the eighth-sixth centuries BC but the discoveries made at the site have not been thoroughly published. According to the descriptions provided by the excavators, the site was defended by a double line of fortification equipped with several protruding towers. As for the two other sites, they were settled in the Hittite period but the main occupation dates back to the Middle and Late Iron Age. Part of the Çevre Kale walls may be of Late Hittite origin but since Iron Age occupation was very dense between the eighth

and the sixth centuries BC the possibility that Phrygians built or at least repaired the previous walls must not be excluded.¹¹ On Gâvurkalesi, two lines of fortification have been brought to light.¹² The one set on top of the hill displays compartments and since compartment walls are a typical Hittite feature and is not used in the area in the following period, it is reasonable to assume that it belongs to the Late Bronze Age. The lower wall, built on the hill slopes, does not display such compartments and is thus more likely to be identified as the Phrygian wall, although this remains to be verified through excavation.

During the Iron Age, the region situated inside the Halys bend was densely settled. Several Hittite sites were reoccupied but new foundations also occur. The best documented site is that of Boğazköy, the capital of the Hittite kingdom. Two fortresses were built during what has been defined as the Phrygian period. The Royal Citadel of the Late Bronze Age, set on Büyükkale, was resettled and refortified (Fig. 4).¹³ Later, walls were constructed to enclose the neighbouring hill, the so-called *Südburg* (Fig. 5).¹⁴ The defensive works are likely to have taken place between the late seventh and the mid-



Fig. 4. Boğazköy. General view of Büyükkale towards the north (author's photograph).

¹⁰ On Yenidoğan: Mellink 1973, 179–80; 1976, 272; Tezcan 1980, 43–5. On Gâvurkalesi: von der Osten 1933, 56–90; Lumsden 1994, 267–80; 1995, 184; 1998, 209–18. On Çevre Kale-Yaraşlı: Summers 1992, 179–206. A second line of fortification has been recently discovered around Çevre Kale. The outer wall is 5 km long. It is not published yet (information kindly provided by G.D. Summers, March 2012).

¹¹ According to Mellaart (1983, 345), the walls could date from the Late Bronze Age.

¹² Lumsden 2002, fig. 11.

¹³ Bittel 1955, 1–36; 1958, 63–72; Bittel & Neve 1970, 5–26; final publication: Neve 1982.

¹⁴ Neve 1989, 306–13; 1990, 268–95; 312–4; Seeher 2006, 106–8.



Fig. 5 Boğazköy, Südburg. The gate area (author's photograph).

sixth centuries BC.¹⁵ The wall unearthed on the north-west slope may have been part of an outer fortification intended to enclose some kind of lower town.¹⁶ At Alişar Höyük, the Hittite-period citadel wall was used as a base for the fortification operations of the Iron Age.¹⁷ In a subsequent phase, an outer wall was constructed to protect the domestic quarters.¹⁸ At Alaca Höyük, Çadır Höyük, Kültepe, Maşat Höyük and Büyük Güllücek, the Iron Age communities resettled in Bronze Age citadels. They may have repaired the old walls but this hypothesis is very difficult to prove.¹⁹

In the Halys region a lot of information has recently been gained thanks to the excavations conducted on the Kerkenes Dağ. This immense city was founded in the late seventh century BC. The construction program included the 7-km long walls that enclosed the whole city.²⁰ It was equipped with 68 towers and a glacis, and was accessible via seven gates (Figs 6, 7.3 and 7.4).²¹ The site of Pazarlı further north is also a new foundation but its date is uncertain.²² This small site may be a little later than Kerkenes and its walls may have been constructed in the sixth century BC.²³



Fig. 6 Kerkenes. City wall in the Cappadocia Gate area (courtesy of Geoffrey Summers).

¹⁵ Period Bk Ic-a in Boğazköy chronology. Büyükkale was settled and refortified before Südburg.

¹⁶ Schirmer 1969, 14–8; Genz 2007, 135–51.

¹⁷ Bittel 1937, 287.

¹⁸ Bittel 1937, 290–339. Three phases have been determined: 4cM (eleventh–ninth centuries BC), 4bM (ninth–eighth centuries BC), 4aM (seventh–sixth centuries BC).

¹⁹ On Alaca: Arik 1937; Koşay 1951; Yıldırım & Gates 2007, 296–8. On Çadır Höyük: Gorny 2006, 15–6. On Kültepe: Özgüç 1971; Wittke 2004, 346–7. On Maşat Höyük: Özgüç 1978; 1982; Wittke 2004, 351. On Büyük Güllücek: Koşay & Akok 1957; Crespin 2001, 174.

²⁰ For a general presentation of the walls see Summers 2006b, 173–4. For the latest discoveries see Summers *et al.* 2010, 1–111; 2011, 1–71.

²¹ A detailed presentation of the city wall is available in Çayırtepe 2006, 52–95.

²² Çevre Kale: Summers 1992, fig. 3; Boğazköy (Büyükkale): Neve 1982, pl. 56; Boğazköy (Südburg): Neve 1990, fig. 1.

²³ According to Summers (2006a, 686), Pazarlı could date from: “the early period of Persian domination”, i.e. around the mid-sixth century BC.

Recurrent Features in Central Anatolian Fortifications in the Middle and Late Iron Age²⁴

Among all the sites mentioned, very few have been investigated with the appropriate attention. However, if one takes a careful look at the preserved walls, it is possible to highlight some elements that may reflect the existence of a common design in defensive architecture.

Most of the walls under consideration were built in straight sections giving the plan of the walls a very angular shape (Gordion, Gâvurkalesi, Boğazköy, Pazarlı and Kerkenes). The junction point between each wall section was occasionally reinforced by the adjunction of a tower or of a buttress. This is particularly clear at Çevre Kale and at Boğazköy.²⁵ Protruding towers or bastions were quite numerous on the wall lines. The lower town wall at Gordion was equipped with several of these structures regularly placed at an interval of 16 m.²⁶ According to the excavators, the same distance separated the towers set on the two circuits of Yenidoğan.²⁷ At Boğazköy, the space between each tower was less regular. Twelve towers can be counted on the first-phase wall of Büyükkale (Bk Ic) and 11 supplemented the defence of Südburg.²⁸ The 7-km long city wall of Kerkenes is unsurprisingly the fortification that included the greatest number of towers, since 68 of them have been detected.²⁹ Finally, on the sites where gates have been identified and drawn, it appears that they were systematically used in pairs to guard the entrances (Fig. 7).

The design of the gates is also very similar from one site to the other, especially since most of them were equipped with an open inner court, as at Gordion, Boğazköy, Alishar and Kerkenes (Fig. 7.3).³⁰ At Boğazköy, Kerkenes and maybe at Gordion, some gates were accessible via an oblique ramp flanked by an independent overlapping wall equipped with a tower (Figs 7.4 and 7.8).³¹

Another recurrent feature in Central Anatolian fortifications at that time is the stone glacis. These structures were of two types. As at Gordion, they could be used as a revetment for the hill slopes and thus act as terrace walls. Most probably they were also intended to amplify the monumentality and the defensibility of the place. This is the case at both fortresses in Boğazköy and at Çevre Kale.³² The other type is an independent construction abutted against the fortification wall. The best example is the one found in Kerkenes (Figs 6 and 8). Its closest parallel is the glacis at the citadel of Akalan situated close to the Black Sea.³³ Several glacis have also been detected at Iron Age sites in the vicinity of Kerkenes: at Çeşka Kale, at Tilkigediği Tepe and at Keykavus Kale.³⁴ This device was apparently also used south of the Halys at Göllüdağ and at Havuzköy.³⁵

As for the construction techniques, it is hard to draw firm conclusions from the available material. It is generally accepted that most fortification walls of the preclassical period were made of a stone socle topped with a mudbrick superstructure. This is probably correct. However, although it is the case at a number of sites – at Gordion (first and third phase of the citadel and lower

²⁴ On the chronological issues regarding the sites of the Anatolian Plateau, see Summers 2008, 202–17.

²⁵ Çevre Kale: Summers 1992, fig. 3; Boğazköy (*Südburg*): Neve 1982, pl. 56; (Büyükkale): Neve 1990, fig. 1.

²⁶ Sams & Rose 2012, 502.

²⁷ Tezcan 1980, 43–5. This remains to be ascertained since no plan has been published.

²⁸ See plans in Neve 1982 and Neve 1990.

²⁹ Çayirezmez 2006, 66–7, fig. 3.34.

³⁰ The terms “court” or “chamber” are both used in military architecture to describe a space enclosed by walls situated at the back of the gates, generally in the extension of the passageway. Although ‘gate chamber’ seems to be the most used expression to describe these constructions in archaeological literature, ‘inner court’ or ‘gate courts’ are also used recurrently. In the present article, the term court is favored because the Iron Age gates discussed, which were equipped with such constructions, do not seem to have been roofed. In contrast, the term ‘chamber’ casts an ambiguity regarding the potential presence of a roof. NB: The terms ‘gate court’ or ‘court’ are used by the excavators of Gordion (de Vries 1990, 377), Kerkenes (Summers *et al.* 2011, 33–45) and Sardis (Cahill & Kroll 2005, 597). The term ‘gate chamber’ is used in Boğazköy (*Torkammer*) (Neve 1982, 152–4; 1990, 268).

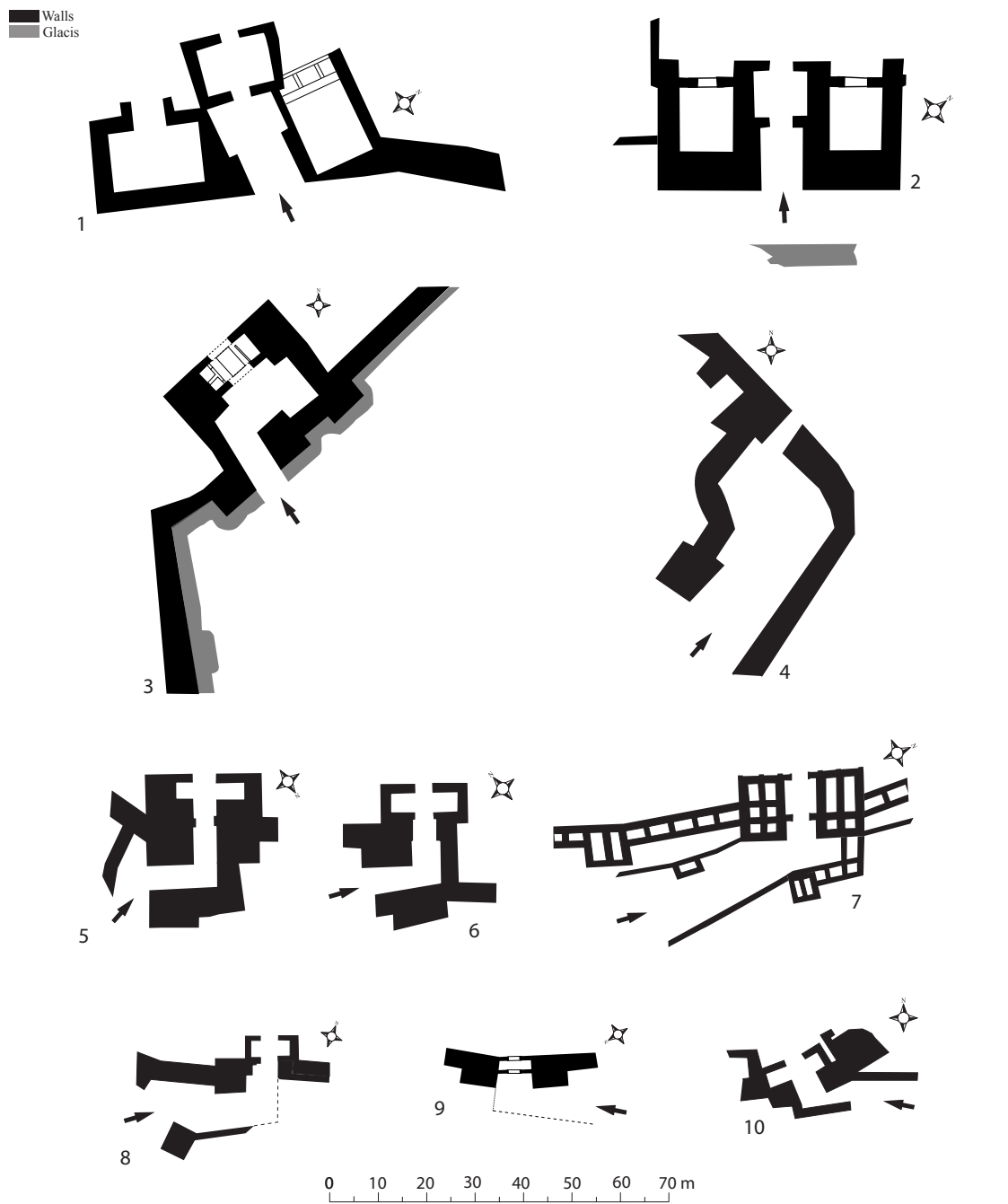
³¹ At Gordion, the situation is less certain. However, the use of this particular feature can be deduced from the presence of a wall jutting out in front of the entrance, on the east site of the gate. See Young 1956, fig. 25.

³² Boğazköy (Büyükkale): Neve 1982, pl. 74b; Boğazköy (*Südburg*): Neve 1990, 268; Çevre Kale: Summers 1992, 184–5.

³³ Macridy 1907; Dönmez 2004, 67–91; Summerer 2005, 64–73.

³⁴ On Çeşka Kale: Strobel 2005, 148–9; Strobel & Gerber 2007, 604–5. On Tilkigediği Tepe: Gurney 1995, pl. 1. Summers *et al.* 1995, 46–53. On Keykavus Kale: Summers 2001, 39–60. Keykavus Kale is situated inside the walls of Kerkenes. Summers proposed a late Achaemenid date for the first phase of the fortifications including the glacis (the second being Byzantine). Strobel dates the site to around the eighth century BC and compares it to Çeşka Kale in the Yozgat region which he also dates to the ninth–eighth centuries BC (Strobel 2005, 148–9).

³⁵ On Göllüdağ: Bittel 1970, 147. On Havuzköy: Boehmer 1967, fig. 10 and 12.



- | | |
|---|--|
| 1. Gordion. Citadel Gate (Iron Age - YHSS 6A) | 6. Karatepe. Southern Gate (Iron Age) |
| 2. Gordion. Citadel Gate (Iron Age - YHSS 5) | 7. Boğazköy-Hattusha. King's Gate (Bronze Age) |
| 3. Kerkenes. Cappadocia Gate (Iron Age) | 8. Boğazköy-Büyükkale. Eastern Gate (Iron Age - Bk Ib) |
| 4. Kerkenes. Gözbaba Gate (Iron Age) | 9. Boğazköy-Büyükkale. Western Gate (Iron Age - Bk Ib) |
| 5. Karatepe. Northern Gate (Iron Age) | 10. Alişar Höyük. Citadel Gate (Iron Age - 4 bM) |

References : 1-2. after Voigt 2007 (fig.3 & 5); 3. after Summers 2011 (fig.52); 4. after Summers (Kerkenes City plan); 5-7. after Naumann 1971 (fig. 404-405, 369); 8-9. after Neve 1982 (fig.84); 10. after Bittel 1937, 321.

Fig. 7 Ground plans of Central Anatolian fortified gates (author's drawing).



Fig. 8 Kerkenes. Section view of the glacis (courtesy of Geoffrey Summers).



Fig. 9 Kerkenes. Inner face of the Middle Tower wall at the Cappadocia Gate showing horizontal beam positions (courtesy of Geoffrey Summers).

town *enceinte*), at Yenidoğan, at Alişar or at Pazarlı – this combination may not have been systematic. For example, the second-phase gate of the citadel of Gordion was constructed entirely in stone. Moreover, it has been recently demonstrated that both the socle and the superstructure of the walls of Kerkenes were made of stone.³⁶ In Boğazköy, the two fortresses may have had a mudbrick superstructure but stone was available in such quantities that the builders may not have needed to make bricks. Moreover, a large number of Hittite blocks were reused in their new buildings.³⁷

Finally, attention should be drawn to the extensive use of wood in the fortification construction. Wood was used for both the foundation and the superstructure at Gordion. Wooden logs consolidated the rubble fill behind the glacis wall built in the third phase and wooden frames strengthened the mudbrick superstructure of the lower town city wall.³⁸ Horizontal beams also helped consolidate the stone socle of the third-phase walls of the citadel.³⁹ The use of this material has also been observed in Boğazköy and in Kerkenes where logs were

set horizontally in the masonry (Fig. 9).⁴⁰ Furthermore, in case of an earthquake, timber had the capacity to absorb the shocks and thus prevent the construction from dislocating.⁴¹

Although this presentation is based on a relatively small number of sites, it still seems that during the Middle and Late Iron Age, the construction of fortifications in Central Anatolia followed some kind of general pattern. This can partly be explained by the fact that the walls built in this wide region belong to a common building tradition. Indeed, several characteristics described above find their origins in Hittite military architecture.

The Hittite Heritage

The Hittite period was critical in the field of fortification. These monuments were built according to some common principles that R. Naumann highlighted in his famous *Architektur Kleinasiens*.⁴² The typical elements are

³⁶ Summers 2006b, 173.

³⁷ Neve 1989, 305–6, fig. 31.

³⁸ Imprints of wooden frames have been observed during M.J. Mellink's excavations on the Küçük Höyük (see M. J. Mellink archives: <http://triptych.brynmawr.edu/cdm/singleitem/collection/Mellink/id/1305/rec/154>; accessed on January 15, 2013).

³⁹ Young 1955, 1 and pl. 1 fig. 2 (background).

⁴⁰ Boğazköy (Büyükkale): Neve, 1982, pl. 76c; Kerkenes: Summers *et al.* 2010, 79.

⁴¹ This has been suggested to explain the extensive use of wood in Gordion: Sams & Burke 2008, 332.

⁴² Naumann 1971, 236–335. Recent works on Hittite fortifications with references in Seeher 2010, 27–43; Mielke 2011, 178–82; 2012, 73–91.

primarily the walls themselves built in the compartment technique and in a combination of wood, stone and brick. They also include the numerous projecting towers, the glacis, the monumental and ornamented entrances, and finally the rounded merlons the presence of which can be deduced from the clay models found in Hattusha. D.P. Mielke underlined that “fortifications are a characteristic element of almost all major Hittite cities”, naming among others Hattusha, Alaca Höyük and Kuşaklı-Sarissa.⁴³ This also applies to Syro-Hittite cities which developed in South-Eastern Anatolia in the Early Iron Age. These urban centres, such as Karatepe, Zincirli or Carchemish, are heirs of Hittite urbanism and their walls, in many respects, testify to that filiation.⁴⁴

In Middle and Late Iron Age Central Anatolia, the Hittite legacy in military architecture is somewhat less striking. One of the most important differences is that Iron Age walls were no longer built according to the compartment technique which was an emblematic feature of Hittite fortifications.⁴⁵ Nevertheless, other elements support the idea of continuity, among them the extensive use of wood in the fortification walls. The utilization of timber was already very common in the Late Bronze Age and Early Iron Age as evidenced by the observations made

in Boğazköy, Kuşaklı-Sarissa and Zincirli.⁴⁶ For example, the technique used in Gordion, whereby horizontal logs were laid at the base of the wall is paralleled in Zincirli.⁴⁷ The wooden frames used to consolidate the brickwork of Küçük Höyük in Gordion have antecedents in Kuşaklı.⁴⁸ Finally, the insertion of horizontal beams in the masonry, as observed in Kerkenes and in the Iron Age Büyükkale walls at Boğazköy, was already a common practice in Bronze Age Boğazköy and Kültepe.⁴⁹

In Central Anatolia, the planning of Middle and Late Iron Age gates is also reminiscent of the Anatolian building practice on Hittite sites. As already stated, gates with courts seem to have been a recurrent element in Iron Age fortifications. The third-phase gate at Gordion, in which the court is set in the passageway is very similar to the Hittite period gates of Boğazköy, Alişar and Alaca, and to the Early Iron Age citadel gate of Zincirli. However, it has to be noted that Late Bronze Age gates seem to have been roofed whereas those of Gordion and Kerkenes were not. Of special interest is the type of gate that was approached by an oblique ramp and sometimes protected by an external wall with a tower. The most famous Bronze Age examples are found in Hattusha (Lion’s and King’s Gates) and later in Karatepe (South and North Gates).



Fig. 10 Boğazköy. Hattusha. Glacis by the Lion Gate (author's photograph).

⁴³ Mielke 2011, 178.

⁴⁴ Syro-Hittite fortifications are discussed in Naumann 1971. For individual sites see notes below.

⁴⁵ The outer wall at Alişar, dated from phase 4aM (7th-6th centuries BC), could be the only exception. See Bittel 1937, 339, fig. 311.

⁴⁶ Naumann 1971, 95–108; Mielke 2009, 81–106.

⁴⁷ Schloen & Fink 2009, 209.

⁴⁸ Numerous photographs and reconstructions available in Mielke 2009, 81–106.

⁴⁹ Naumann 1971, 88.

In the Middle and Late Iron Age, this type of plan was adopted on the Büyükkale (South-East Gate), at Alişar (citadel), Kerkenes (Gözbaba Gate) and maybe in Gordion (Citadel, YHSS 6A) (Fig. 7.4–7.10).

Another important element to consider is the glacis, a type of construction which was very widespread in Middle and Late Iron Age fortifications (e.g. Gordion, Boğazköy and Kerkenes). The similarities are very obvious between the structures from Gordion (citadel gate, YHSS 5), Boğazköy (the Büyükkale and *Südburg*) and Kerkenes and those built by the Hittites in Boğazköy (Yerkapı and Lion's Gate, Fig. 10), or by the Syro-Hittites in Zincirli and Carchemish.⁵⁰ The adoption of the glacis is a very clear witness of the continuity between Bronze Age and Iron Age fortifications in Anatolia.

The problem that remains is to understand precisely how these techniques and concepts could have been transmitted, especially since no fortifications clearly dated between the Late Bronze Age and the late tenth century BC have ever been uncovered in Central Anatolia.⁵¹ With such a chronological interruption in architectural activity, especially in fortification construction, building skills could hardly have been transmitted from one generation to the other. However, on the sites with Bronze Age antecedents, the new builders may have been inspired by the remains still standing, as must have been the case in Boğazköy and probably in Alişar.⁵² Elsewhere, the adoption of a certain gate type or of a glacis, could be explained by the cultural contacts that Central Anatolian communities maintained with peripheral civilizations. For instance, Phrygians were in close connection with the Syro-Hittite states, at least from the ninth century BC, and this is attested both by the texts and by archaeological discoveries.⁵³ The sculptured orthostates found in the gate court of the Early Phrygian period at Gordion (YHSS 6B – 950–900) testify to this durable relationship.⁵⁴ Syro-Hittite

influence is also reflected in the monumental nature of Gordion's fortifications. These massive defence works belonged to an urbanization program aimed at giving the city the attributes of a great capital.⁵⁵ There is thus an apparent desire to emulate Syro-Hittite towns and this emulation benefited the development of military architecture.

Whatever the inspiration source was, it remains clear that Iron Age fortifications inherited features from the Anatolian building tradition which culminated in the Late Bronze Age and that the first millennium builders adopted some of its principles. They also contributed to its perpetuation.

Central and Western Anatolian Fortifications in the Iron Age: A Common Development?

The study of preclassical fortifications faces significant obstacles, particularly in terms of chronology. Even where careful studies have been conducted, it is not always possible to achieve firm dating. Nevertheless, research carried out on a few reference sites allows us to make some observations on the development of fortifications in the early first millennium BC.

As per the current state of research, the oldest known fortification wall in the Iron Age has been dated to the late tenth or early ninth century BC and was built to protect the citadel of Gordion. After the initial construction, this defence system underwent several modifications in the ninth century BC and was reconstructed shortly after 800 BC. In the Middle Phrygian period, i.e. between 800 and 550 BC, a city wall was built to enclose the lower town. This large construction possessed numerous towers and two mighty fortresses.⁵⁶ Both fortifications at Boğazköy and

⁵⁰ On Zincirli: von Luschan *et al.* 1898, 119. On Carchemish: Wooley 1921, fig. 14.

⁵¹ Genz 2011, 336. The possible Early Iron Age wall of Kaman Kalehöyük awaits more investigations. As for Alişar, the Early Iron Age phase (4c) may have been a limited repair of the previous fortifications.

⁵² This idea, expressed by Bittel (1970, 147) about Boğazköy, also applies in our opinion to all sites where fortification walls from previous periods were still standing.

⁵³ Vassileva 2008, 165–171.

⁵⁴ According to Sams (1989, 447–54) the orthostates of Gordion were comparable to those found in Zincirli and Carchemish which are dated to the tenth or ninth centuries BC. Sams wrote that the orthostates from Gordion were later but “no later than 800”. With the new dating of the citadel destruction and new stratigraphical studies, the orthostates would have been carved in the YHSS 6B period i.e. between 950 and 900 BC (Voigt 2005, 29–30).

⁵⁵ On this aspect see Harmanşah 2011, 638–42.

⁵⁶ The construction date of Gordion's lower town wall is a matter of debate. Mellink, who excavated the fortress on Küçük Höyük, dated its construction to the late seventh or early sixth century BC but also found evidence of a previous fortification phase. On this chronological issue see de Vries 2011, 17–9.

the city wall of Kerkenes, which also possess numerous towers and a glacis, have been dated to the late seventh or early sixth century BC on archaeological grounds.⁵⁷ By comparison, the same date could be suggested for the site at Yenidoğan where the occupation dates back to the eighth-seventh centuries BC. Hence, even though the picture is incomplete, the evidence indicates that by the end of the seventh or in the early sixth century BC, the long history of fortification construction in Central Anatolia entered a new phase. This phase is characterized by the development of powerful defence systems that could be defined as urban, as they seem to be increasingly directed toward the protection of settled areas.

In Western Anatolia, this period is also marked by new developments in the field of fortification. The great city wall of Sardis is probably the best witness of this intense activity in military architecture along with the walls of Smyrna, Phokaia and maybe those recently discovered in Clazomenae.⁵⁸ It is interesting to note that all four defense systems were equipped with a glacis.⁵⁹ The adoption of this device, which is probably the most typical element of Central Anatolian military architecture, is a clear demonstration of the influence of the Anatolian building tradition on Greek and Lydian fortifications. A.M. Greaves, in his recent book on Archaic Ionia, underlined the close proximity between the phokaian glacis and the one at Kerkenes, both made of stones and abutted against the main wall (Figs 8 & 11).⁶⁰ It is possible to go further in the comparison by pointing out that both these walls are part of a new trend which is partly defined by the general improvement in the efficiency of fortification and by the emergence of very large fortified perimeters, commonly referred to as *Geländemauern*. The lower town fortifications of Gordion and the *enceinte* of Kerkenes, as well as the walls of Phokaia and Sardis, belong to this category.

It appears that the turn of the seventh and sixth centuries was a critical period for Anatolian fortifications. Not only did they increase in number in both the centre and



Fig. 11 Phokaia. City wall section with glacis at Maltepe (author's photograph).

the west of the region, but these new constructions also testify to a better conception of defence (recognizing the necessity of incorporating the vulnerable parts of the landscape) and were designed in conjunction with the urban development. In sum, they are better planned and increasingly directed towards the protection of the population on a permanent basis. Sites such as Gordion, Kerkenes, Sardis or Phokaia are the precursors of a tendency that will gradually intensify in the sixth century BC as evidenced by the construction of the city walls in Samos and Miletos.⁶¹

This situation should be considered in the light of the tumultuous military and political contexts of Iron Age Anatolia, marked by the rise and fall of the Phrygian and Lydian kingdoms and the rising threat represented by the Persians. The importance of these events should not be minimized as the fear of attack is an essential condition for the emergence of fortifications and their military function should never be considered as a secondary factor.⁶² Nevertheless, the development of defence

⁵⁷ The 7-km long circuit wall at Kerkenes displays 68 towers (Çayırtepe 2006, 67 fig. 3.34). The *Südburg* walls at Boğazköy were equipped with 11 towers (Neve 1990, fig. 1) and the Büyükkale had certainly more than twelve (Neve 1982, pl.56, Bk Ic phase).

⁵⁸ General presentations of Sardis walls are found in: Cahill & Kroll 2005, 589–617 and Dusing 2003, 47–56. On Smyrna: Nicholls 1958–1959, 35–137; Clazomenae: Bakır *et al.* 2008, 313–32; Ersöy *et al.* 2010, 185–204; 2011, 331–68. On Phokaia: Özyiğit, 1994, 77–109.

⁵⁹ The glacis from Sardis and Phokaia date from the early sixth century BC. The one in Smyrna is dated to the classical period (Nicholls 1958–1959, 87, fig. 24, pl. 9). However, the existence of such a structure in the archaic period remains possible (*ibid.* 48, 72 n.66). As for the glacis in Clazomenae, this is associated with the Archaic gate. It remains to be determined whether it belongs to the first fortification phase or to the later reinforcement of the city wall in that area.

⁶⁰ Greaves 2010, 117, 161.

⁶¹ On Samos: Kienast 1978. On Miletos: Greaves 2010, 106 with references.

⁶² Snodgrass 1980, 32–3; Aubagnac 1990, 61.

structures in preclassical times should also be explained by the consolidation of sociopolitical structures within Anatolian communities. Sites such as Gordion, Boğazköy, Phokaia or Sardis were settled long before they were equipped with a wall capable of protecting, if not all, at least a substantial part of the population. The construction of city walls implies an amount of human and material resources that only a strong political power would have the capacity to gather together. In the seventh and sixth centuries BC an increasing number of Anatolian and Greek communities had these resources at their disposal and employed them to affirm their identities, embellish their cities, and address a message of strength to their contemporaries.⁶³

Finally, it is important to stress that, in that period, fortification walls were not only defensive constructions and symbols of power. In Central as well as in Western Anatolia, they were already a key element in the definition of urban space. In Phokaia, for instance, the construction of the city wall led to the abandonment of settlement quarters situated outside the perimeter.⁶⁴ In Kerkenes, it was only after the wall plan and the position of gates had been determined that the urban blocks were laid out.⁶⁵ Those two examples illustrate well the role played by fortifications in the urbanization process and underline the proximity of the two regions in terms of urban development.

Conclusion

From the late tenth until the mid-sixth century BC, Central Anatolia played a significant role in the renewal of architectural activity in the field of defensive construction. Analysis of the rare available material shows that fortifications built in Central Phrygia and in the Halys bend shared common traits: they were built in straight sections, they employed a great amount of timber, they were equipped with glacis and numerous towers and were accessible via oblique ramps leading to gates with open courts. The fact that most of these elements are to be found in fortification walls of the Hittite period or in those built by the Syro-Hittites in South-Eastern Anatolia supports the idea of continuity in the architectural practice in the region. Although the chronological sequence remains imprecise, it seems that

the construction of fortifications in Central Anatolia entered a new age at the turn of the seventh and the sixth centuries BC which was partly characterized by the erection of true city-walls. From this period, the fortifications were fully part of the urban project and this phenomenon was not confined to this region as large city walls also emerged in Western Anatolia. Moreover, the presence of glacis in both Greek and Lydian fortifications allows us to put forward the unsuspected ties that existed between the two regions under consideration, in military architecture, and suggests that western builders were influenced by the Anatolian architectural tradition. These considerations indicate that the study of preclassical fortifications in Anatolia should not only focus on individual regions but should be envisaged in a wider perspective that transcends the usual geographical and academic boundaries.

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⁶³ Garlan's words summarize this reality well (1968, 259): "Le rempart [...] demande à être regardé comme un symbole de force, un blason de noblesse dont l'éclat rejaillit sur la cité".

⁶⁴ Tréziny 2006, 242.

⁶⁵ Summers 2006b, 167.

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ORIGINS OF SABAEAN FORTIFICATIONS OF THE EARLY 1ST MILLENNIUM BC – SOME SUGGESTIONS TO THE EXAMPLES OF THE CITIES MĀRIB AND ŠIRWĀḤ (YEMEN)

Mike Schnelle

Abstract

At the end of the 2nd millennium BC at the latest, several kingdoms in South Arabia emerged. One of them – the kingdom of Saba' – dominated the economic and political life of the southern part of the Arabian Peninsula at the beginning of the 1st millennium BC. The supervision of the trade of incense and aromata on the incense road and the development of elaborate irrigation systems formed the basis for the prosperity of these kingdoms, in spite of hard environmental conditions and limited resources. Symbols of the competition between these kingdoms, which were involved continuously in warlike operations, are preserved in numerous urban centres in the form of complex fortifications.

The most important political and religious urban centres of Saba' were the cities of Mārib and ŠirwāḤ, which were probably walled right from the beginning of their history. The numerous differences of both cities such as their respective topographic setting, size, structures and functions range up to their fortifications: for instance the fortification of Mārib displays several building and utilization phases shown by different materials and construction techniques accumulated on top of each other. This can be interpreted as a response to the rise in ground level of the irrigated fields surrounding the city.

At the fortification of ŠirwāḤ individual building elements were repeatedly removed and new ones constructed from precious materials were inserted in their place like implants. These transformations of the fortifications were not only executed because of military necessity but also as a showcase for the display of power.

Introduction

At the end of the 2nd millennium BC up to the beginning of the 1st millennium BC in South Arabia several kingdoms developed in the central highlands and in

the border area between the highlands and the inner Arabian Desert.¹ Their economy was based on the one hand on terrace agriculture in the highlands² and the construction of spacious fields in the oasis or at the end

¹ For the rise and development of South Arabian communities see Audouin *et al.* 1997, 63–77; Daum 1999; Nebes 1996a, 13–22; Nebes 2001, 427–35; Seipel 1998.

² For the ancient agriculture in the highlands of Yemen see Wilkinson 1999, 183–91; Wilkinson 2002, 102–7; Kopp 2005, 13–16; Gerlach 2012, 187–98.

of the wādīs between the highlands and the desert, which were irrigated³ and on the other the control of the trade of incense and spices between South Arabia and the Levant and across the so-called incense road.⁴ Strong fortified cities represent the centres of these competing kingdoms which were constantly fighting for domination in this economic region, which from nature is poor in resources.⁵ Their massive fortifications,⁶ numerous war reports in dedicatory inscriptions as well as the few but important preserved monumental operation-reports of Sabaeen rulers,⁷ give hints to the bellicose attitude of these competing kingdoms, which fought primarily over the domination of the incense trade. The most powerful of these kingdoms in the early 1st century BC was Saba', which dominated large areas of Southern Arabia and the north of present-day Ethiopia and South Eastern Eritrea,⁸ politically, economically, and religiously. Two comprehensive operation-reports of Sabaeen rulers document already in the 8th and 7th centuries BC the economic and political contacts of Saba' with Assyria and confirm their potency by contacts with powerful neighbours.⁹

That the fortification of a Sabaeen city could be an immediate reaction to warlike conflicts with conquering neighbours, is shown not only in the numerous descriptions of raids in the operation-reports or the preserved fortifications themselves, but also the circumstance, that in D'MT, controlled by Saba', not a single fortification

exists, but – as in South Arabia – there are numerous richly appointed temples and palace buildings.¹⁰

The cities of Mārib and Ṣirwāḥ¹¹

The cities of Mārib and Ṣirwāḥ (Fig. 1) were the most important economic and religious centres of the kingdom of Saba' probably from the end of the second and certainly at the beginning of the 1st millennium BC. Mārib – as the capital of the kingdom of Saba' – with a size of up to 98.5 hectares¹² and fortifications ca. 4 km long was the largest city in Southern Arabia at this time.¹³ By contrast, Ṣirwāḥ can be identified as a religious centre¹⁴ – likewise strongly fortified – with a size of only 3.8 hectares¹⁵ and with fortifications about 780 m long. Both cities seem to be walled right from the start of their occupation; up to now no older architectural elements than the fortifications have been detected.¹⁶ Even for Mārib this statement has yet to be proved by excavations, which unfortunately could not, up to now, be carried out.

The topographic setting of the cities

The location of the Sabaeen city of Mārib (Fig. 2) is on the plain bordering the highlands, in the centre of enormous

³ For the ancient artificial irrigation in the oasis see Brunner 1983; Brunner & Haefner 1990, 135–53; Hehmeyer 1991; Schaloske 1995; Vogt 1998, 181–4; Vogt 2004a, 67–104; Gentelle 2003, 106–41.

⁴ For the trade over the incense road see Müller 1977, 701–77 and Groom 1981.

⁵ For the climatic conditions during the 2nd and 1st millennium BC see Brunner 1983, 10–13; Brunner 1997, 190–202; Pietsch *et al.* 2010, 1–15.

⁶ For an overview of the South Arabian fortifications see Breton 1994 and additionally to urban aspects of ancient South Arabian cities see Schiettecatte 2011.

⁷ For the war reports in dedication scripts see Beeston 1976; Nebes 1996b, 279–97; 2004, 273–88; 2005, 335–55; 2011, 362–7. For the operation reports of Sabaeen rulers see Müller 1985, 651–68; Nebes 1998, 165–7; 2007, 25–33; 2011, 362–7.

⁸ This Ethio-Sabaeen polity in the mentioned region in North Eastern Africa is called D'MT. See Bernand *et al.* 1991; Nebes 2010, 214–37.

⁹ Referring here to the operation reports of Karib'il Watar from the year 685 BC und Yīṭa'amar Watar from the year 715 BC inside the 'Almaqah-temple in Ṣirwāḥ. See note 7.

¹⁰ For the sacral architecture in South Arabia see Jung 1988, 177–218; Schmidt 1982, 161–9; *ibid.* 1987, 78–98; *ibid.* 1997/98, 10–40; Darles 1998, 209–13; Sedov 2005; Gerlach & Schnelle 2013, 211–22 and for sacral and administrative architecture in D'MT see Robin & de Maigret 1998, 738–98; de Maigret 2011, 121–32; Wolf & Nowotnick 2010a, 164–213; *ibid.* 2010b, 363–76; Schnelle 2012, 387–415.

¹¹ Investigations by the author at the fortifications of Mārib and Ṣirwāḥ are part of larger multidisciplinary projects to these Sabaeen centres by the Sanaa Branch of the German Archaeological Institute under the guidance of I. Gerlach, to which I would like to express my deepest gratitude.

¹² Schnelle 2007, 47, n. 21. Different sizes for the city area and the length of the fortification of Mārib have been published in the past: Vogt 1998, 183: area 110 ha, length 4.2 km; Röring 2008, 28: area: 104 ha, length 4.2 km.

¹³ Vogt 1998, 183.

¹⁴ For the function of the city and the recent research projects see: Gerlach 2003, 96–106; Gerlach & Heckes 2003/4, 37–56; Gerlach & Hitgen 2004, 210–20; Gerlach 2004, 152–3; 2005, 34–51; 2006, 4–9.

¹⁵ See note 12.

¹⁶ In Ṣirwāḥ, inside the 'Almaqah-temple cultural layers with ¹⁴C-dates from the 2nd millennium BC could be detected – but these are without architectural remains.



Fig. 1 Map of South Western Arabia with the ancient cities of Mārib and Širwāḥ (cartography by R. Szydlak, Tübingen, Mapping by M. Schnelle, DAI).



Fig. 2 Aerial picture of the oasis of Mārib from 1973 with the irrigated field system and the area of the ancient city of Mārib (marked in red). (Aerial pictures by Aero Precisa, Beirut and British Royal Air Force; Photogrammetry, Rectification and cartography by M. Gehrig and R. Schoch; Mapping by M. Schnelle, DAI).

irrigated fields, within the Mārib oasis.¹⁷ These irrigated fields originally covered an area of up to 100 km² and were connected to each other by water channels.¹⁸ The flood came twice yearly from the mountains during the rainy season and was captured at the great dam of Mārib,¹⁹ and the water was channelled through a main channel and a wide branched network of irrigation channels to the fields.²⁰ The oasis was divided by a wide wādī, which transported the excessive water away and separated the oasis into a northern and a southern part. The city of

Mārib is situated at the northern border of this wādī. Its present-day topographic position amidst the flat surrounding of the oasis is merely slightly raised and we assume that the elevated position of the city goes back to the time of the establishment.²¹

The small city Ṣirwāḥ (Fig. 3) is located in the highlands, 35 km far away from Mārib also inside an oasis, but on top of a rock plateau which overlooks the oasis, a much more suitable location for communication and defence.²²

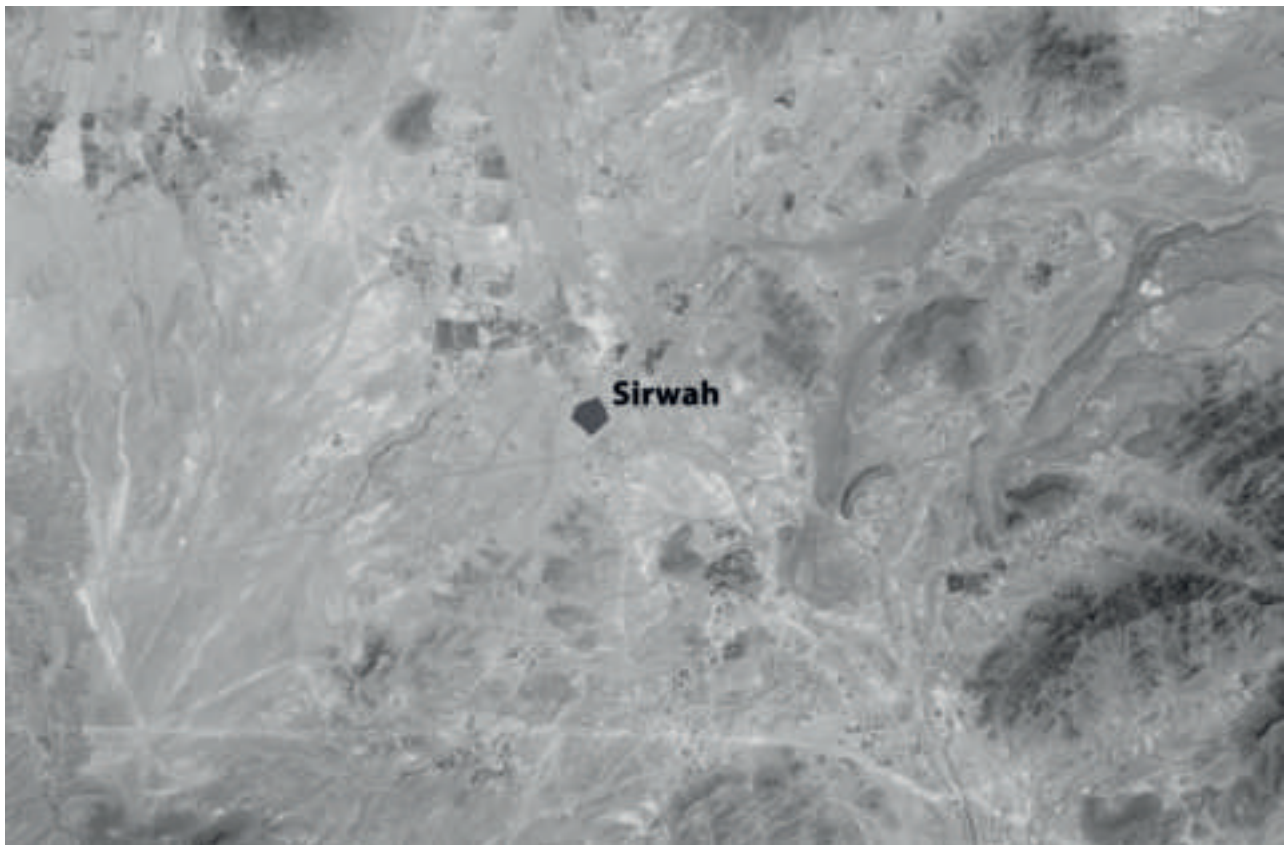


Fig. 3 Satellite picture of the oasis of Ṣirwāḥ with the ancient city (marked in red). (Retrieved March 31, 2015 from Google Earth, Mapping by M. Schnelle, DAI).

¹⁷ For the setting and surrounding of the town in the oasis see: von Wissmann 1976; Finster 1987, 73–95; Vogt 1998, 180–4. In one of the forthcoming ABADY (Archäologische Berichte aus dem Yemen) new results of intensive survey in the ancient town and oasis of Mārib will be presented.

¹⁸ Vogt even assumed an extension of 176 km². See Vogt 1998, 182.

¹⁹ On the great dam of Mārib see Brunner 1998, 63–7; 2000, 167–82; Vogt 2007, 121–41.

²⁰ See note 3.

²¹ The inevitable expansion of the city wall, which happened again and again because of the sedimentation by irrigation, gives hints that the position of the city was not remarkably raised in ancient times.

²² Gerlach & Heckes 2003/4, 37–56; Gerlach & Hitgen 2004, 210–20; Schnelle 2007, 45–6.

Structure of the cities

Because of the lack of archaeological excavations in Mārib (Fig. 4) we have almost no information about the inner structure of the city. Based on inscriptions, descriptions of historians and some architectural findings it is certain that there were numerous temples and palace buildings inside the city. In addition there are areas which were not or rarely built-up and had different uses.²³

Because of extensive archaeological and building historical research over more than ten years we may now conclude with certainty that mainly sacral, palace and administrative buildings dominated the townscape of the city of Ṣirwāḥ (Fig. 5).²⁴ These were so numerous that some were integrated into the earliest phases of the fortification system.²⁵ The structure of the town was dominated by a principal road, which ranges from the south-east to the north-west and divided the town into two parts.²⁶ In the north-eastern part of the city numerous sacral buildings are located. In the south-western part similar structures can be supposed – but they are yet to be excavated.

The fortifications of Mārib and Ṣirwāḥ²⁷

As the functions of these cities differ, so too do their fortification systems. Up to now, the oldest fortifications known in South Arabia are those of Mārib. Due to the artificial irrigation of the fields encircling the town and the raising of the surrounding ground level by up to 30 m caused by sediments deposited by the annual

flooding,²⁸ the height of the city wall had to be increased over the centuries.²⁹ Its history can be detected through its horizontal stratigraphy.

In the lowest, earliest layers massive structures of mud bricks are detectable, on which later on – may be in the 10th century BC³⁰ – wall cases made of lapili-breccia³¹ were erected (Fig. 6). How far back the lowest, massive mud brick constructions are dating is still unclear.³² This will have to be investigated by archaeological excavations or other analysis in the future.

On top of the lapili-breccia wall cases made of Jurassic limestone were erected (Fig. 7). These can be dated to between the 8th and 6th centuries BC by comparison with construction techniques in Ṣirwāḥ.

We know little about the course and the structure of the first phase – made of massive mud brick. At some places this structure is still visible under later settlement layers, mostly in erosion channels at the eastern and southern border of the city. However, it seems that at least in some parts the massive mud brick structures follow the course of the visible fortification. We have no information about the inner structure and the fortification system of this first detectable phase and there is no information about the number of towers, gates and curtain walls, etc.

It seems that these massive walls were constructed up to a width of 14 metres.³³ The later wall cases of the 10th century BC were realized as a very stringent system of curtains and towers. The yet later phase – made of Jurassic limestone – followed the course and geometry of the earlier wall.

²³ Vogt tried a preliminary separation of parts of the town by observing visible architectural structures: Vogt 1998, 184. In addition see note 12.

²⁴ See Gerlach 2003, 96–103; 2003/4, 37–56; 2004, 152–3; 2005, 34–41; 2006, 4–9; Gerlach & Heckes 2003, 163–78; Gerlach & Hitgen 2004, 210–20; Röring 2008; and Schmidt 2007, 201–304.

²⁵ See Schnelle 2007, 47–53; Japp 2012, 297, 311–12, 315, 317.

²⁶ Röring 2008, 29; Japp 2012, 299.

²⁷ The comprehensive results of these investigations are part of the author's doctoral thesis which will be published soon.

²⁸ Brunner 1983, 47, 65; Vogt 1998, 182.

²⁹ Finster 1987, 75.

³⁰ This dating is a result of a comparison of similar structures made with the same material used at the city wall at Ṣirwāḥ and which there can be dated at least back to the 10th century BC.

³¹ In contrast to this, Finster described this stone material in the city wall of Mārib as tuff: Finster 1987, 76. According to the geologist C. Weiß, the stone material is lapili breccia.

³² Finster recommended a dating of the earliest mud brick constructions as contemporary with the so-called 'Bau A', without any evidence: Finster 1987, 86. Vogt suggested a date at the beginning of the 2nd millennium BC (Vogt 1998, 182), which was later questioned by Gerlach: Gerlach 2012, 195. Schmidt even gave a date of 2700 BC for the mud brick constructions of the early fortifications of Mārib by comparing the absolute altitude of a ¹⁴C-sample from the nearby Wādī Dana with these structures: Schmidt 1997/98, 14, n. 10. But without any archaeological context of connected layers this interpretation of the date has to be doubted.

³³ Finster 1987, 76, pl. 18c: detectable e.g. at the so called 'Wadi A' in the eastern part of the city-wall. Schmidt mentioned a width of 7 m: Schmidt 1997/98, 14.

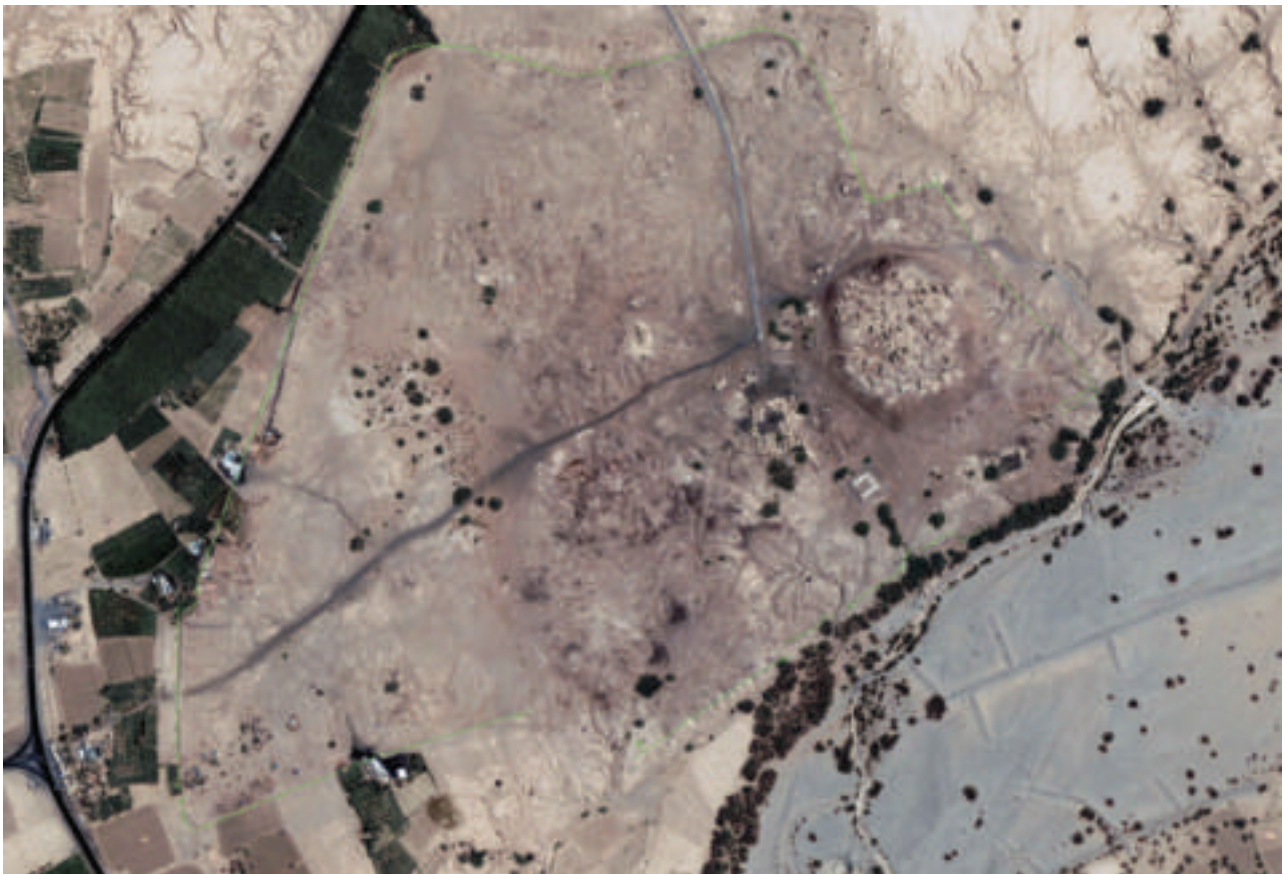


Fig. 4 Satellite picture of the ancient city of Mārib with the course of the fortification (green line). (Digital Globe, Quickbird, 2003, Mapping by M. Schnelle, DAI).

In contrast to the fortification of Mārib – in Şirwāḥ a comparable earliest phase of massive mud brick construction is no longer detectable. There the earliest phases of the fortification walls are made of travertine and lapili-breccia,³⁴ which date at least as far back as the 10th century BC³⁵ and were founded on top of the bedrock (Fig. 8). Already at the beginning of the formation of the city the whole area seems to be walled – except the south-western part where a ridge creates a natural inaccessible barrier.

In the earliest phases the city wall of Şirwāḥ is designed as a casemate wall system³⁶ of between 6.50 m and 9 m in

width. Excavations in the area of the city wall have shown that the chambers between the outer- and innermost wall cases were used for living and production from the earliest times. This kind of utilization is an exception in Şirwāḥ – elsewhere in the city no comparable utilization – like living or production quarters – are as yet detected (Fig. 9).

In contrast to Şirwāḥ there is not a comparable casemate wall system in the fortifications at Mārib and no evidence for chambers within the wall either. Breton has identified wall systems – either designed as deep structures separated by casemate walls or as separate

³⁴ For the stone material used at the city of Şirwāḥ see Weiß 2014.

³⁵ This dating is a result of comparisons of palaeographic and building history evidence, which will be published in context in the author's Ph.D. thesis.

³⁶ Naumann used the term 'Kastenmauer' for the thick walls of ancient fortifications in Asia Minor with an outer and an inner wall and with the space between these walls filled. He used the term 'Kasematte' for these kinds of walls with unfilled spaces: Naumann 1971, 238–40, 250, 309–10. The term 'casemate wall' is used in the description of ancient South Syrian and Levantine fortifications by Lapp (1976, 25–42) and Wright (1985, 176–86).



Fig. 5 Map of the ancient city of Širwāḥ (M. Schnelle, DAI).



Fig. 6 North-eastern part of the fortification of Mārib cut by a wādī. In the lower parts massive mud brick constructions are detectable. On top of these wall cases made of lapili-breccia are preserved (photo by M. Schnelle, DAI).



Fig. 7 Part of the south-eastern fortification of Mārib close to the gate complex T-VI. The lower parts of this wall segment are constructed of lapili-breccia (dark) and the upper parts are made of jurassic limestone (lighter). (DAI).



Fig. 8 Curtain wall at the north-eastern part of the fortification of Şirwāḥ. The towers left and right can be dated to later phases. The inscription in the middle of the curtain seems to be in situ (S. Amtsberg, DAI).

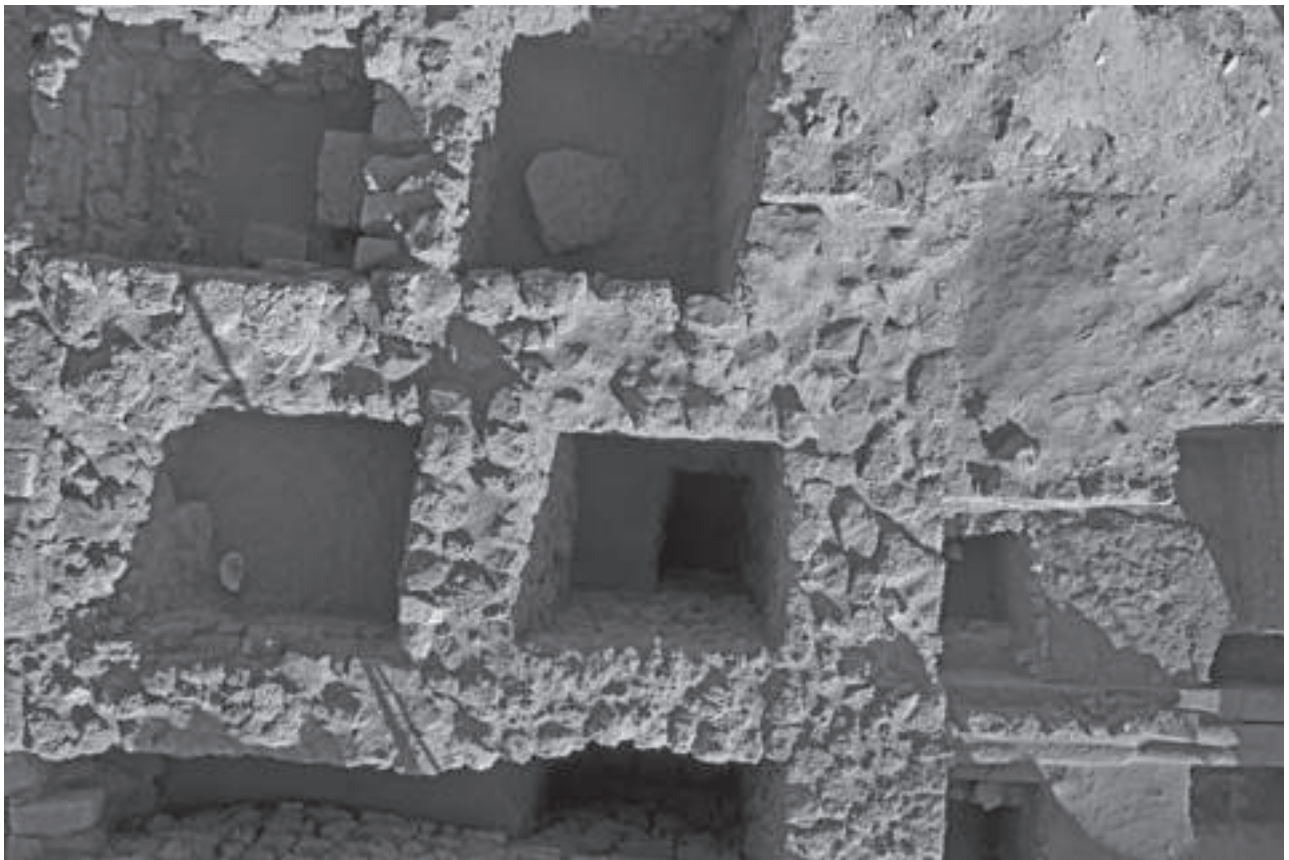


Fig. 9 Casemate wall system of the north-eastern part of the fortification of Şirwāḥ (S. Amtsberg, DAI).

houses, each abutting the adjacent neighbouring house – at other very early fortifications in South Arabia.³⁷ He suggests a prototype of fortifications in South Arabia where houses were constructed in such a manner as to create a circular city wall,³⁸ in which case the first phase of the city wall of Ṣirwāḥ in the 10th century BC with its alternating array of towers and curtains could represent an adaptation of this type.

Similar to Mārib, the course of Ṣirwāḥ's city wall changed little over the course of its history. Not until the late 1st century BC can some extensions at the south-eastern part of the enclosure be detected.³⁹

Comparison of the fortifications of Mārib and Ṣirwāḥ

The formation of Sabaean fortifications – including those from Mārib and Ṣirwāḥ – was a task reserved for the Sabaean rulers (in the early times referred to as Mukarrib = “Unifier”).⁴⁰ This is proved by numerous identical building inscriptions, which were found especially at the city wall of Ṣirwāḥ. This practice was different from that of other South Arabian kingdoms, where tribes were responsible for the erection and maintenance of the walls.⁴¹

At the city walls of Mārib and Ṣirwāḥ basic differences can be detected. At Ṣirwāḥ, even in the earliest phases, a casemate wall system was constructed. By comparison, at Mārib after the earliest not easily datable massive mud brick constructions, wall cases were exclusively made of ashlar, which probably were sometimes built around the older brickwork made of adobes. This means that at Mārib the fortification could not be used as a living or production area.

Over the course of time there was a change of meaning to Sabaean fortifications: when they were first built fortifications were purely functional. With the advancement and improvement of the South Arabian stone dressing technique, which went along with the ambition for representation and exposition of power and wealth,



Fig. 10 Embracing wall of the 'Almaqah-temple of Ṣirwāḥ, which is part of the fortification. This embracing wall with its fine dressed stones made of jurassic limestone dates to 7th century BC (photo by I. Wagner, DAI).

the fortifications of Mārib and Ṣirwāḥ developed to become objects of prestige in the 8th and 7th century BC (Fig. 10). By this time, the city walls were increasingly mantled with white limestone or – in the case of Ṣirwāḥ – complemented by new representative buildings, which were built into the existing wall structure like implants.⁴² At this time in South Arabia the number of invasions seems to decrease and the settled power of Saba' in the late 7th century BC was mirrored by the erection of representative architecture and the fortifications seem to symbolize these changing fortunes.

³⁷ Breton 1994, 141–54, 183; 1998, 175. He described e.g. the cities Haḡar 'Arrā and al-ḡanādila as city walls with a casemate wall system and the cities Haḡar Ḥamūma, Naḡrān, Ḥinū az-Zurayr and Yalā as cities with separate adjacent houses, forming an enclosure.

³⁸ Breton 1994, 183.

³⁹ Schnelle 2007, 46–7.

⁴⁰ Thanks for this information to N. Nebes (Jena); also Breton 1994, 155.

⁴¹ Inscriptions are preserved at the city wall at Barāqīṣ, which report, that for example the southern part of the fortification of Barāqīṣ was erected and maintained by local tribe members: Breton 1994, 179.

⁴² Schnelle 2007, 49–52, 54–5. For the location of these limestone deposits see: Weiß – Koch – Gerlach 2007, 571–92.

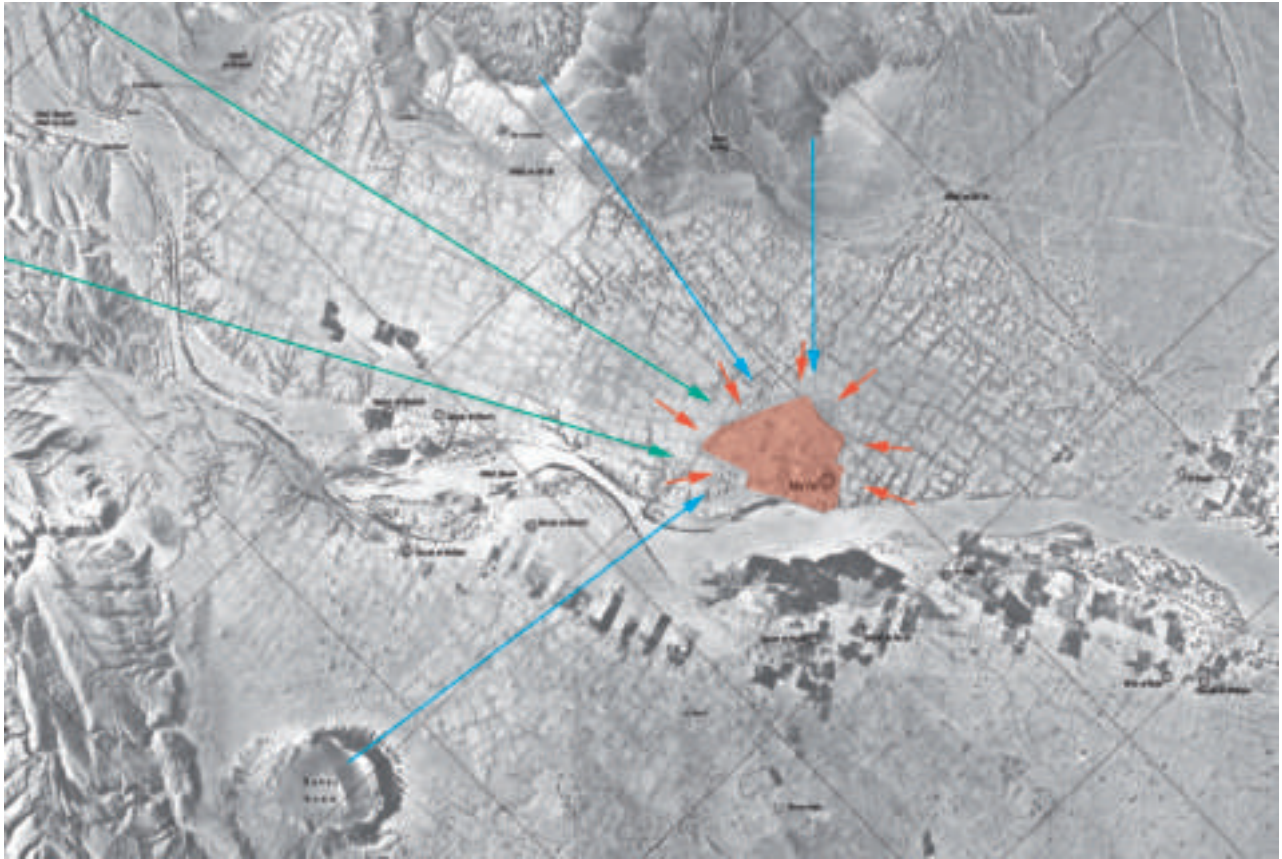


Fig. 11 Sources of building material for the fortification of Mārib: 1. Red arrows: first phase – mud from the irrigation fields; 2. Blue arrows: second phase – lapili-breccia from the lapili deposits; 3. Green arrows: third phase – Jurassic limestone from quarries with larger distances (aerial pictures by Aero Precisa, Beirut and British Royal Air Force; photogrammetry, rectification and cartography by M. Gehrig and R. Schoch; mapping by M. Schnelle, DAI).

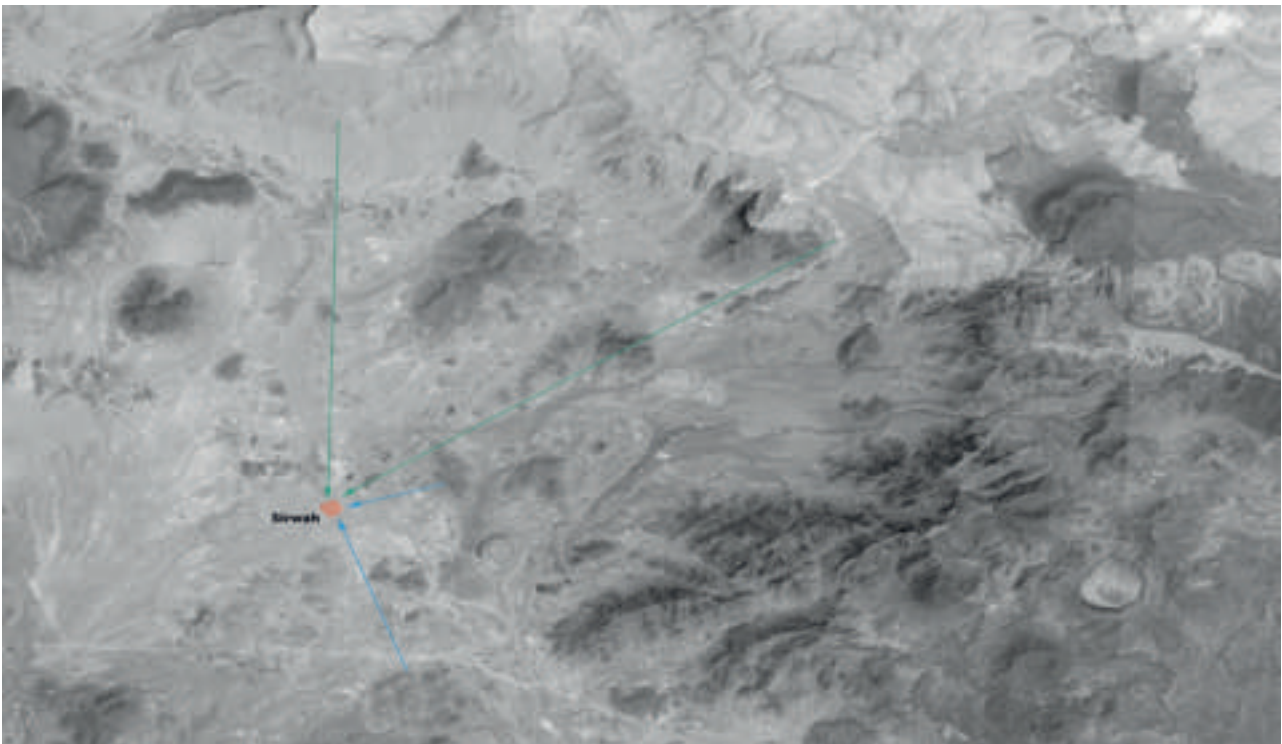


Fig. 12 Sources of building material for the fortification of Şirwāh: 1. Blue arrows: second phase – lapili-breccia and travertine from the lapili- and travertine deposits (same deposits!); 2. Green arrows: second phase – Jurassic limestone from quarries with larger distances (retrieved March 31, 2015 from Google Earth; mapping by M. Schnelle, DAI).

With the increased requirement on the design and construction of the fortifications of Mārib and Širwāḥ, so the area for the acquisition of building material for the construction of the fortifications widened. For the construction of the earliest phases of Mārib's fortifications, the mud bricks could be produced straight from the flood sediments in the immediate neighbourhood (Fig. 11). In Širwāḥ the travertine and the lapili-breccia of the first detectable building phase of the fortification were available at a distance of only a few hundred metres.⁴³

At Mārib it was necessary in the second building phase to transport the lapili-breccia over a distance of 5 km. In the third building phase the ashlar of white Jurassic limestone, which were used up to this time only for sacral buildings, had to be transported over a distance of 8–10 km or more from the quarry to the city.⁴⁴ In Širwāḥ a distance of 9–15 km had to be covered for the transport of Jurassic limestone for building elements of the fortification (Fig. 12).⁴⁵

Fortification and warfare – epigraphic evidences

As already explained the evolution processes of the South Arabian kingdoms were always connected with bellicose activities and the fortifications easily understood as a reaction to this. The military campaigns always had the aim not only to take over cities, but also to destroy the economic basis of the enemies – the agricultural areas.⁴⁶ Conquered populations were usually killed or enslaved. The epigraphic evidence – most of it in the form of operation reports – gives us no information at all about methods of warfare.⁴⁷ It seems that warfare in South Arabia meant quick and mobile offensives, invasions with flexible troops, without heavy siege engines or artillery. There is no direct epigraphic, archaeological or architectural evidence for a fast or continuous development of defence technology and corresponding reaction in the architecture at the beginning of the 1st millennium BC.

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⁴³ According to the geologist C. Weiß (personal communication).

⁴⁴ Harrell 2007, 182–192.

⁴⁵ Weiß – Koch – Gerlach 2007, 571–92.

⁴⁶ Displayed for example in the operation reports of Sabaean rulers: it is mentioned that whole cities and their surrounding economically connected landscapes were misappropriated or devastated: Nebes 2011, 363.

⁴⁷ Beeston 1976, 1–2; Breton 1994, 166–9.

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Physical Surroundings and Technique: The Building Experience

PHYSICAL SURROUNDINGS, TECHNIQUE AND BUILDING EXPERIENCE: THE STATE OF RESEARCH IN THE NETWORK FOKUS FORTIFIKATION

Peter D. De Staebler

Introduction

The construction process for a fortification is different from most other categories of architecture. Since fortifications were often a community's most massive undertaking and each is made up of numerous semi-independent structures, such as towers and gates connected by stretches of curtains and ramparts that could often run many kilometres through the landscape, they demand special consideration. Because of their atypical size, realized fortifications represent a series of compromises between their intended functions¹ on the one hand and the available technical and economic resources on the other.

This conference session grew out of the second meeting of the network Fokus Fortifikation, held at the Swiss School of Archaeology in Athens in late March and early April 2009, which was designed to highlight an investigation into the 'Natural Setting, Technology and Logistics' of ancient fortifications. The primary topics we considered included how the exact selection of a site influenced the choice of materials in a fortification; how those materials were worked; and what specific decisions regarding the plan, materials and finishing were made at different stages of the process of planning and constructing the fortification. In our concluding discussions, the main topics coalesced around a comprehensive catalogue of masonry styles and construction techniques,² and the 'Building Experience', a catch-all term that encompasses the ancient decision-making process.

* The ideas expressed in this paper originated at the second Fokus Fortifikation Meeting, 'Natural Setting, Technology and Logistics', held at the Swiss School of Archaeology in Greece, in Athens in April 2009. The working group included Jean-Claude Bessac, Sylvian Fachard, Brita Jansen, Peter Schneider and the present author. For a more developed presentation of these ideas, see also MÜTH *et al.* 2016, chapter 4, 'The Building Experience'.

¹ On the functions of fortifications, see MÜTH *et al.* 2016, chapters 6, 7 and 8.

² See MÜTH *et al.* 2016, chapter 5.

The papers collected here all work to identify which elements of a fortification were generated by practical necessities that the builders had to take into consideration, and which characteristics were optional. This latter group represents the body of deliberate choices made by the builders, and these choices are the elements that provide real evidence for discussion of the various functional or aesthetic levels of the different components. The goal is to analyse all the circumstances that had to be taken into account by the builders and evaluate the options at their disposal. For any particular fortification, it can be hypothesized which observable characteristics depended on the landscape into which the fortification was inserted; the availability of specific materials, of time and of money; on the size and abilities of the labour force and presence of skilled workshops; or on access to current offensive and defensive military strategies. Consideration of any – or all – of these topics illuminates details of the Building Experience of a fortification.

Over the course of our extended discussion of this topic, we worked to select a vocabulary that was not specific to any given geographic region, chronological period or category of materials. For example, in our discussion of where materials were procured for a fortification, we selected words like ‘origin’, ‘source’ and ‘materials’, rather than ‘quarry’ and ‘stone’. Although a great amount of the literature on ancient fortifications, especially for the Greek world in the Classical and Hellenistic periods, is centred around fortifications built from cut stone,³ by using this language, mud-brick walls, a wooden palisade, or rampart made up of architectural spolia can all be considered on equal linguistic terms with newly quarried ashlar.

Considerations

The ultimate goal of an investigation into the Building Experience – whether of a fortification or in fact of any ancient monument – is to be able to better present an economic evaluation of the construction process. The main elements of the economic evaluation are an estimate of the amount of time needed to build a wall, and an estimate of the overall cost of the project. In order to accomplish these estimates, it is necessary to closely examine the materials used to build the wall, and the techniques used to work those materials.

Time, cost, materials and techniques are only tangentially related to the ‘functions’ of the wall. These functions can range from its military efficacy, to perhaps its impression of imperial grandeur, to the role it played in the conception of the city it surrounded, all the subject of other sessions of this conference.⁴ The calculation of cost of the overall project does not necessarily arrive at a specific modern-day cash equivalent in absolute terms, and time is not necessarily counted exactly in years or months. Often it is more feasible and practical

to identify, in relative terms, where costs and time were economized or lavished on the project, whether on an entire project or on an individual section of it (such as the primary gate). These relative designations of haste or leisure, economy or extravagance can make it easier to compare the experience at different sites since other inflexible considerations might unduly influence absolute numbers.

A few brief examples can illustrate the comparison of time/cost and materials/techniques in general terms. First are two instances where time and costs were not economized. In the main gate passage of the Archaic walls at Eretria on Euboea, an extravagant polygonal masonry style is used, where the stones interlock in a saw-tooth pattern.⁵ This undoubtedly was an expensive way to join stones that took a longer time to create (there is anathyrosis along each section of the joints), but this masonry type is limited to the gate passage, and so likely was used there for a symbolic effect rather than out of practical necessity. Second, at late Classical Herakleia on Latmos in south-western Caria, the walls feature a famously profligate multiplication of regularly spaced,

³ McNicoll 1997; Leriche & Tréziny 1986; Ginouvès & Martin 1985.

⁴ See especially section ‘Physical Surroundings and Technique: The Building Experience’ in this volume.

⁵ Fachard 2004, 99–100.

nearly impossible-to-reach towers that encircle the entire site.⁶ Many are located at the edges of cliffs or high on a ridge, far distant from any potential attacker's siege engines. The pink andesite stone in the walls and towers is all immediately local, and the ashlar are fairly large though not especially finely dressed. These redundant and reduplicated towers would have taken a longer time to build and would have significantly increased the expense of the overall project. Since they do exist, however, the patron of the fortification likely deemed that they served an important function, though not one immediately related to the practicalities of defence or that is clearly recognizable to us in the present day.

In contrast to the previous examples, Dura-Europos on the Euphrates illustrates a site where the fortification was built in a way that maximized efficiencies of time and costs, and materials and techniques – twice.⁷ The wall was built by rushed builders at a site under threat of imminent attack in both Hellenistic and late Roman times. The gypsum fortifications, in particular the long straight western wall that closes off the site from the plateau, were first built by the Greeks in the 2nd century BCE prior to an attack by the Parthians. The quality of stone, quarried from within the site itself, and of the stonework is quite variable, with both of higher quality at the northern end of the land wall than at the southern. In fact in some sections, only the socle is stone while the upper part of the wall is constructed of unbaked brick. In a second phase, prior to the famous Sasanian attack in 256/257 CE, the Roman garrison worked to strengthen their defences, but only had the time and resources available to construct massive earthen embankments against the interior and exterior faces of the still standing Hellenistic wall in the hopes that these supports would help protect against sappers and siege machines. Observation of the remaining structure makes it clear that stone and brick sections of the wall are contemporary, and that that Roman intervention in the wall was limited to burying it within the embankments.

Some aspects of the investigation into the Building Experience involve outside knowledge of the site that

can be learned from literary or historical sources that describe or mention the site or describe events in the region during the period in question.⁸ With regard to an assessment of time, is it possible to tell from sources whether or not the builders had specific cause to be rushed or leisurely? Was there a period when the site was under threat of imminent attack, and can the construction of the fortification be tied to this, whether before or after the period of greatest threat? At the time when the fortification was built, was the region unsafe, or peaceful? Is the city in a dangerous location, for example on a frontier, or in a relatively secure site deep within an empire? With respect to an assessment of cost, was the city itself poor or wealthy at the time when the fortification was built? What percentage of their resources could be allotted to a defensive project? What was the basis of the local economy? What were the main sources of local income? Who was the patron, and what command of resources was available to be applied to the fortification project? Also very important is the status of the site: is it a provincial town, an imperial foundation,⁹ a border post, a fortress along an important trade route or an internationally famous sanctuary? The status of the site is very important when considering the details of the construction of a fortification.

The remaining two assessments are observed primarily in the fabric of wall itself. Of the materials, are they strong? Are they especially hard to work? Do they originate from far away,¹⁰ or are they from close at hand, and do not require much effort to shape? Are they the best materials available, or are they at least better than other local materials? To what extent do local geology and local ways of working with materials influence the choice of primary materials used for the fortification?¹¹ How much would it cost and how much time was necessary to supply these exact, selected materials from among the vast array of potential options?¹²

In terms of technique, is the wall carefully and consistently built, or is construction irregular? Are the techniques basic or elaborate? Does the wall include decorative elements,¹³ or is it primarily utilitarian? Can the selected

⁶ Krischen 1922; McNicoll 1997, 75–83.

⁷ J.-C. Bessac, 1997, II, 217; Leriche & Coqueugniot 2011.

⁸ On historical sources for fortifications, see Müth *et al.* 2016, chapter 10.

⁹ See von Bülow on Galerius at Romuliana-Gamzigrad in this volume: pp. 314–324

¹⁰ See Cifani on the imported tufas used in the Republican walls of Rome in this volume: pp. 82–93.

¹¹ Bessac 1996, on small-stone limestone ashlar masonry.

¹² This question was part of Anne Brysbaerts talk on the the 'bathroom floor' block at Tiryns in this session, which is not included in this publication.

¹³ See Saner *et al.* on the polychrome masonry at Larisa in this session: pp. 159–170.

primary materials only be worked in certain ways,¹⁴ and how do these techniques influence our interpretation of overall quality of the fortification? But also, in the case of any inconsistencies in materials or in construction details, can these be attributed to rushed workmanship and a lack of time, difference in workshop practice,¹⁵ or to a deliberate desire to cut costs?

As mentioned previously, the facts that can be entered into the Building Experience equation absolutely must include any evidence from literary or textual references and from inscriptions. However, caution is necessary not to give these excessive weight and not to let pre-existing assumptions about a site or region or chronological period override direct observation – the goal here is to deduce as much as possible from the monument itself.

Observations

During the examination of a fortification in the field, it is necessary to focus on gathering the largest amount of practical and technical information, through direct observation of the materials seen in the wall and the techniques used to work those materials. To understand the building process, the observer must carefully follow, and reconstruct, the logic of the original construction as well as any later modifications, extensions or repairs. As part of our collective investigation into the Building Experience, we have produced a checklist of steps for the close observation of the materials and techniques to help supply the most facts that are relevant for an accurate economic evaluation of a project.

Identify the materials. Identify all the materials that are visible. Of primary importance is stone or brick that make up the bulk of the wall, but also be sure to note all the different ingredients of the mortar, the metal clamps, the filling in the core, the foundations, decorative aspects, etc.

Describe the materials. Look at both micro- and macro-aspects. What are the materials' capabilities as part of the structure? In general, what are the limits of the materials, and how did the builders take these limits into account?

Identify the substrate. Map the location of different materials below and within the wall. What is the wall

built on top of? What kind of rock or earth? How many different substrates does the wall cross, and are different building materials used over differing areas of local bedrock? Also consider water run-off, and how is this accounted for in the construction of the foundations?

Source the materials. Identify and map the origins of all the materials: stone quarries, clay pits, gravel pits, lime, sand, iron and lead mines, timber forests, and any architectural spolia. Where do the materials come from? Transport can be more expensive than quarrying, so what distances were the different materials moved?

Following this close observation of the materials, take stock of some *First Intermediate Conclusions*. Through observation of only the materials, what has been learned about the planning choices made by the builders before construction even started? What materials were selected? How would those materials be used? How much effort would go into transportation? Explain your current understanding of the choices made in antiquity, based on observation of facts and details of the internal and external structure of the wall. Is construction consistent, and is it possible to see in the structure whether any modifications were made to the original plan? Was the plan carried out faithfully and consistently, or does it significantly diverge from the intended construction? These considerations are very different for new construction or for a later rebuilding of an earlier wall, whether along the earlier line or on a different course, around a newly founded city or a new wall around an existing or enlarged city.

The next set of observations involves looking at how the selected materials were worked.

Describe the techniques. What preparatory work was done to the materials off-site prior to transport to the site? What was done on-site in order to be able to place the materials in the wall? What surface finishing work was done after the elements were put in place in the wall? In evaluating the surface finish, take into account the location of the stretch of wall relative to the overall plan of the fortification, and what kinds of surface finish are possible for the different materials.

Recognize tools and machines. Track every tool used on the materials, from the source to placement in the wall to final finishing of the surface. Consider the chronology

¹⁴ See Dalyancı-Berns & Henning on the polygonal masonry at Monte Crocchia in this session: pp. 171–182.

¹⁵ See Hof on the different ways of constructing small-span arches in the gallery at Resafa in this volume: pp. 397–412.

of different technologies or tools used. Also consider the origin of different marks left on the materials: which are purely functional, and which are more likely to be decorative?

Identify Carved Symbols. Distinguish between quarry marks and masons' marks. Look for any other evidence of workshop organization or practice, such as standard sized blocks, or standardized dimensions.

Following the observations of aspects of technique, make a set of *Second Intermediate Conclusions*. Coordinate the observations of the materials with those of the techniques. How do these fit with what is known of the overall plan of the wall? How do those relate to the placement of towers and gates? And how are these coordinated with the other elements of the natural and built topography of the rest of the site?

Finally, make the *Economic Evaluation*. Consider the entire design and construction process. Estimate how much time was taken and the workforce necessary, and, therefore, how much money was spent. Were easily available resources used, or more distant ones? Were laborious techniques used, or efficient ones? In relative terms, how much effort was expended on practical considerations and how much on decorative ones? Make use of aspects of ethno-archaeology and experimental archaeology.

Sample conclusions

By way of conclusion, a sample economic evaluation can be offered for the fortification at Aphrodisias, a city in western Asia Minor occupied from the late Hellenistic to Byzantine periods.¹⁶

First, the site. In the Late Roman period, the city was a provincial capital, so within its region it was a relatively important place. The city had also enjoyed a long history of imperial favour,¹⁷ and was home to an internationally respectable series of monuments and artistic traditions.¹⁸ The wall is dated by two inscriptions to the 360s CE, and this is confirmed by excavations.

Second, materials and techniques. The wall is constructed of white marble. The interior face is made up of regularly coursed sub-ashlar blocks, and the exterior face is an approximation of pseudo-isodomic ashlar masonry, made up entirely of architectural spolia, almost all derived from high imperial tombs that once filled the necropoleis. The strength of the wall comes from the mortared rubble core.

Third, cost and time. The patrons of the project saved some costs by using existing architectural blocks for the exterior face. However they could have economized further by re-using even more existing architectural blocks, for example a larger number of seat blocks from the stadium, and the smaller blocks for the interior face were to be all newly quarried. The patrons also saved some time by using the spolia, but these blocks are laid in a way that is somewhat more complicated than strictly necessary, in a way that took extra time – the blocks are evenly coursed in alternating high and low rows, and are not a patchwork of differently sized blocks all mixed together with the gaps filled with smaller stones. There is an observable balance of expenditures: some savings were made on time and costs (i.e. it could have cost more, or been built more slowly), but there were also some extravagances (i.e. it could have cost less, or been built more quickly).

Finally, in the end result, the urban fortification at Aphrodisias is a unique monument that takes into account a balance of all the considerations. The following entries in the session also describe the results of close observations of a number of fortifications, stretching in time from the Bronze Age to late Antiquity, and in space from Syria, to the Aegean, to the Balkans.

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¹⁶ On the wall, see De Staebler 2008; on the development of the city, see Ratté 2001 and 2002; on the territory, see Ratté & De Staebler 2012.

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TECHNIQUES ET ÉCONOMIE DE LA CONSTRUCTION DES FORTIFICATIONS EN PIERRE: MÉTHODES ET PERSPECTIVES

Jean-Claude Bessac

Résumé

Les études techniques et économiques sur la construction des fortifications sont rarissimes. Il importe donc de sensibiliser les chercheurs à une approche plus pratique du thème en complément des études classiques. En amont du chantier, la nature et les fonctions précises de l'ouvrage militaire projeté orientent les principaux choix des constructeurs. Mais ils sont soumis aussi aux conditions naturelles et anthropiques locales et régionales (géologie, topographie, climat, situation militaire, moyens financiers, outillage, niveau technique des constructeurs) qui déterminent la majorité des options architecturales et techniques. Les possibilités d'approvisionnement en diverses catégories de pierres, dans un rayon géographique aussi court et facile que possible, influencent l'essentiel du projet. Les appareils des murs (polygonal, trapézoïdal, rectangulaire, etc.), les formats des blocs (irréguliers, modulaires), les stratégies et les techniques de production (outillage, extraction, transport, taille, pose et finition) dépendent en très large partie de la qualité des ressources géologiques et de leur conditions d'accès. La valeur professionnelle des équipes de constructeurs doit également être prise en compte. Les responsables de la construction sont contraints d'organiser les chantiers et de coordonner leurs diverses phases en tenant compte de ces impératifs naturels tout en les accordant aux exigences militaires. Les temps de production sont fondamentaux pour les fortifications. Leur évaluation nécessite des enquêtes ethnoarchéologiques ainsi que le recours à l'archéologie expérimentale. L'efficacité générale de cette recherche et l'interprétation réaliste de ses résultats sont conditionnées par une étroite collaboration entre l'archéologue généraliste et le spécialiste du bâtiment traditionnel. De telles investigations ne peuvent qu'ouvrir de nouvelles perspectives dans ce domaine.

La problématique générale

Les études sur les techniques et l'économie de la construction des fortifications en pierre ne sont pas

nouvelles, mais elles sont souvent partielles et noyées dans des publications plus larges¹ plutôt que traitées comme thème principal. En général, elles sont issues de recherches conduites à partir de diverses sources

¹ Martin 1965; Orlandos 1966–1968; Adam 1984; Wright 2000–2009.

historiques et, plus particulièrement, des traités de poliorcétique.² Les analyses architecturales et, plus spécialement, l'observation des appareils des murs et des dispositifs de liaison des blocs constituent également une manière de traiter le sujet.³ Mais les études spécialement consacrées aux techniques et à l'économie de cette catégorie de monuments sont quasi inexistantes.

En dépit du grand intérêt des approches classiques pour l'histoire et l'archéologie de la construction des fortifications, une autre vision de ces questions est envisageable grâce à des recherches plus centrées sur l'industrie traditionnelle du bâtiment. Le but visé ici n'est pas la présentation d'une méthode de recherches infaillible qui, de toutes façons, n'existe pas. Il s'agit de compléter les approches antérieures tout en s'ouvrant à des résultats généraux plus nuancés, voire divergents. Là est la véritable difficulté de sa mise en œuvre en raison du bouleversement que cela implique au sein d'un système de recherche qui reste encore très majoritairement académique. Mais, dans cette voie, les perspectives innovantes sont telles que le risque vaut la peine d'être couru.

Il est difficile de traiter ici tous les aspects de cette orientation des recherches qui implique une perception et surtout une interprétation des indices matériels tout à fait inhabituelle des chantiers antiques. Seules les grandes lignes méthodologiques et les perspectives de ce type d'approche seront donc présentées en les illustrant de quelques exemples concrets pris sur divers sites antiques méditerranéens.

L'interprétation archéologique du chantier par le constructeur traditionnel

Avant d'aborder les méthodes d'analyse d'une construction défensive, il importe de connaître l'approche d'un professionnel du bâtiment, spécialiste du travail de la pierre, confronté à l'étude de cette catégorie d'ouvrage. Quelles questions se pose-t-il et quelles données lui sont nécessaires pour tenter d'y répondre ? Son premier réflexe est de se placer dans la position du constructeur antique, comme s'il devait réaliser lui-même l'ouvrage. Il examine donc, point par point, tout le processus de conception et

de réalisation, y compris les aléas communs aux grands chantiers de défense (intempéries, défections d'équipes, remords architecturaux, menaces extérieures, etc.). Étant lui-même praticien,⁴ il recherche sur l'ouvrage surtout les indices concrets en relation avec son sujet pour les interpréter. Son objectif est donc de retracer l'histoire propre du chantier et, au-delà, d'essayer de voir comment elle s'insère dans l'histoire générale du site et de sa région.

Les sources historiques militaires antiques sont assez lacunaires, les écrits qui nous sont parvenus sont souvent entachés de propagande et leur objectivité est contestable. Il est donc important d'essayer de confronter ces données aux réalités du terrain. L'analyse technique et archéologique du bâti constitue aussi un moyen d'investigations complémentaires et de vérifications. En outre, elle peut déboucher sur des faits historiques secondaires méconnus. Par exemple, dans certains secteurs des fortifications hellénistiques de Doura-Europos, l'identification de traces produites par des outils de moins en moins bien entretenus et la mise en œuvre maladroite de toutes sortes de qualités de pierres mal taillées révèlent une accélération soudaine du chantier, vraisemblablement sous une menace militaire.⁵ Cette précipitation a été tellement contraignante pour cet ouvrage que ses derniers secteurs, au nord du rempart occidental, ont été terminés en briques crues (Fig. 1).⁶



Fig. 1 Secteur de rempart occidental de Doura-Europos construit en blocs de gypse de façon précipitée et achevé en briques crues (© J.-C. Bessac, CNRS).

² Garlan 1992.

³ Adam 1982, 16-35.

⁴ Tel est mon cas, l'archéologie prenant la suite de plus de vingt ans d'exercice de la taille de pierre traditionnelle.

⁵ Bessac 1988, 310; Bessac & Leriche 1992; Gelin 2010, 442.

⁶ Bessac & Leriche 1992, 75 fig. inf.; Gelin 2010, 437-50.

Quelques points clés pour l'étude technique des chantiers de fortification

Il existe une succession logique des phases du processus technique de la construction d'une fortification que le chercheur essaie toujours de respecter. Faute d'indices matériels, il est pourtant vrai qu'il est souvent contraint de sauter une ou plusieurs étapes pour passer aux suivantes, quitte à revenir ensuite sur les questions laissées en attente. D'un autre côté, les interdépendances entre chaque phase du travail sont si fortes et nombreuses que de multiples allers-retours sont obligatoires d'un bout à l'autre de la chaîne opératoire pour bien la comprendre dans toute sa complexité. La liste des thèmes et des opérations présentée ci-dessous adopte donc une suite pratique correspondant à la logique du chantier, mais les aléas de la recherche permettent de s'en affranchir. Le chercheur doit essayer de réfléchir comme le constructeur antique chargé des travaux, mais souvent, il doit le faire aussi en sens inverse puisqu'il est obligé de partir de la fin du chantier pour remonter jusqu'en amont du projet.

De la carrière au rempart terminé, il existe cinq grandes phases bien connues des spécialistes de l'archéologie du bâti : l'extraction des blocs, leur transport, leur taille, leur mise en œuvre et parfois leur finition sur place, en particulier pour les composantes architecturales les plus ostentatoires, notamment les portes. Mais un tel chantier ne s'improvise pas. En amont de celui-ci, il existe toute une série de problèmes interactifs à résoudre et il est essentiel de commencer par là.

LA DÉFINITION DE LA NATURE PRÉCISE DE LA CONSTRUCTION DÉFENSIVE

En préalable à toutes recherches, il faut bien cerner la nature militaire exacte de la commande : enceinte urbaine, citadelle, fortin isolé, tour de guet, etc. Par exemple, en raison de son ampleur, l'enceinte urbaine nécessite un chantier fragmenté en plusieurs tranches, souvent confiées à diverses équipes ou entreprises. Tout en respectant le programme général des responsables de la défense de la ville, chaque équipe va faire des choix techniques propres à son expérience professionnelle et surtout aux conditions géologiques et topographiques du secteur dont elle a la charge. Une certaine hétérogénéité dans les détails du résultat

architectural peut donc en résulter. La construction d'une citadelle est d'habitude plus homogène du fait de son volume restreint et les changements techniques révèlent plus des transformations ultérieures à sa première édification qu'une hétérogénéité du chantier initial. Cette particularité est d'autant plus nette pour des ouvrages isolés de moindre envergure.

La fonction et la position de l'ouvrage militaire influencent également les choix techniques, économiques, voire esthétiques des constructeurs. S'il s'agit de la défense d'une ville frontalière soumise à une menace permanente, l'efficacité immédiate est privilégiée au détriment de l'esthétique. L'approvisionnement en pierres est alors recherché au plus près, *intra muros* et, si possible, au pied des murs, même si la qualité de la roche est médiocre. La finition des blocs est limitée au minimum indispensable pour leur mise en œuvre. Tel est le cas général de l'enceinte hellénistique de Doura-Europos, dont les pierres sont extraites dans la ville et à l'aplomb des murs (Fig. 2).⁷ Par ailleurs, les décors architecturaux sont inexistantes et les traitements esthétiques des parements rarissimes. En contrepartie, une enceinte romaine, comme celle d'Auguste à Nîmes, élevée loin des frontières durant une période de paix, révèle une hiérarchie des matériaux et des traitements des parements fondée sur le caractère et l'importance ostentatoire des composantes architecturales (portes, tours, courtines). À l'est de la ville, la porte principale est constituée de trois variétés de calcaires extraites respectivement à 3, 10 et 25 km de là.⁸ La plus éloignée, qui est aussi la plus fine et se



Fig. 2 Tour nord-ouest de la citadelle de Doura-Europos : sa carrière se trouve à sa base et ses fronts ont été exploités selon son plan (© J.-C. Bessac, CNRS).

⁷ Bessac 1997, t. 2, 114–6; Bessac 2004b, 240–2.

⁸ Bessac 1987, 28–31 fig. 2.

laisse facilement travailler, est ornée de sculptures. Le calcaire dur de l'affleurement intermédiaire est réservé aux composantes architecturales moulurées (corniches et encadrement des arcs). Le calcaire froid,⁹ qui est le plus proche et le plus difficile à tailler, est utilisé pour les parements ordinaires en grand et petit appareil.¹⁰ Des constats comparables sont valables pour la majorité des villes romaines.

LE DÉTERMINISME DE LA GÉOLOGIE: FORMATS DES BLOCS, APPAREILS ET ASPECT DES TAILLES

La géologie d'une cité et de ses environs détermine le choix des variétés de pierres de sa fortification, mais aussi leur appareil et leur traitement en parement. C'est le facteur majeur à prendre en compte dans une étude de rempart tant il influence le résultat architectural. L'identification des couches géologiques des pierres d'une fortification est nécessaire essentiellement dans le cadre de la recherche des affleurements dont elles proviennent. L'archéologue du bâti s'intéresse surtout aux caractères lithostratigraphiques et techniques des roches locales utilisées ou non pour la construction. Il les observe et éventuellement les teste avec des outils de taille pour définir leurs possibilités optimales d'emploi dans le cadre des chantiers de fortification. Il est également intéressant de rechercher les raisons d'un éventuel rejet d'une variété de pierre alors qu'elle paraît utilisable.

En zone méditerranéenne, les formations homogènes de calcaire compact et dur présentent fréquemment un modelé karstique avec un lapiaz très tourmenté en surface ou un relief ruiniiforme qui détermine des pointes rocheuses (Fig. 3). Les blocs erratiques angulaires et les diverses irrégularités rocheuses qui résultent ainsi de la dissolution de la roche par les eaux météoriques chargées de gaz carbonique facilitent la production rapide de blocs polygonaux, comme à Cyrrhus dans le nord de la Syrie (Fig. 4)¹¹ ou à Érétrie dans l'île d'Eubée.¹² Ce déterminisme géologique n'est pas propre à une période en particulier; au contraire, il existe des exemples qui révèlent une certaine durée de cette influence. Celle-ci n'est atténuée que par les progrès de l'outillage et par



Fig. 3 Pointe rocheuse du lapiaz de l'affleurement de calcaire froid de Cyrrhus à proximité de sa citadelle, avec fracture restée inachevée (© J.-C. Bessac, CNRS).



Fig. 4 Appareil polygonal du rempart initial de Cyrrhus à proximité de sa citadelle: de très nombreux parements sont naturels ou bruts de fracture (© J.-C. Bessac, CNRS).

⁹ Pour désigner la dureté relative des roches, les professionnels français de la pierre utilisent des termes suivants: très tendre, tendre, ferme, demi-dure, dure et froide; il existe aussi une échelle des difficultés de taille à quatorze indices, de la plus facile à la plus difficile à travailler, voir Noël 1968, 136.

¹⁰ Employés dans l'état naturel des strates, ces deux derniers appareils sont aussi très prédominants dans les fortifications préromaines de la région nîmoise. Dans le petit appareil régulier augustéen adapté au format des strates, la productivité en carrière est de 7 à 8 m³/jour/homme; avec ces blocs, un tailleur de pierre produit 2 m² de parement/jour et un maçon + un manœuvre posent 2 m³ de mur/jour, y compris son remplissage, voir Bessac 1987, 32-5.

¹¹ Bessac 2012a, 380; Bessac 2013.

¹² Fachard 2012, 258.

l'extension en profondeur des carrières. Tel est le cas des remparts d'Ampurias en Catalogne espagnole qui, entre le V^e siècle av. J.-C. et le règne d'Auguste, connaissent quatre extensions, toutes avec une forte prédominance de cet appareil.¹³ Entre le plus ancien et le plus récent, une petite évolution est observable aux abords des poternes et des angles saillants de la partie romaine. Là, l'appareil polygonal diminue au profit du trapézoïdal et, en moindre mesure, du rectangulaire. Ces changements tiennent ici à un progrès de la qualité de l'outillage, mais aussi à l'élimination de la couche superficielle de la roche du lapiaz par les extractions antérieures qui ouvrent l'accès à des strates plus régulières et un peu moins indurées. Dès le début de la fortification de ce grand comptoir grec, il aurait été possible de construire les murs en appareil trapézoïdal ou rectangulaire, mais il aurait fallu y consacrer beaucoup plus d'efforts et de temps, autant pour l'extraction que pour la taille.

Dans les massifs marbriers plus ou moins schisteux, comme certaines variétés de Ténos ou de Délos, l'appareil trapézoïdal régulier est le plus facile à obtenir.¹⁴ Cela tient à la régularité des fractures liées aux faiblesses structurelles des veines schisteuses parallèles entre elles ainsi qu'aux fissures tectoniques obliques qui les recoupent. Une stratification très régulière de la roche, comme c'est le cas pour le gypse de Doura-Europos, favorise l'emploi d'un appareil rectangulaire approximativement modulaire en longueur et en largeur des blocs.¹⁵ Mais elle exclut une normalisation des hauteurs d'assises lorsque les blocs sont employés dans leur lit de carrière. Par ailleurs, l'importante variation des hauteurs des strates du gypse local favorise l'usage de l'appareil pseudo-isodome à assises de carreaux et boutisses alternés en orthostate (Fig. 5).¹⁶ Ainsi, avec un minimum de travail, il est possible d'utiliser diverses épaisseurs de strates, y compris les plus faibles, à l'arrière des orthostates à l'intérieur du mur. Les grandes faces de ces blocs correspondant aux joints de stratification naturellement plats, leur taille est inutile. L'économie réalisée concerne donc le matériau et la main d'œuvre. Mais cet aspect du gypse de Doura-Europos est local. Plus en amont dans la vallée de l'Euphrate, à Halabya-Zenobia et à Resafa, les strates sont plus épaisses et homogènes et

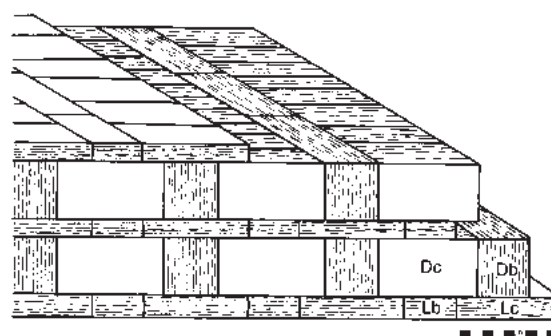


Fig. 5. Schéma de l'appareil pseudo-isodome à assises d'orthostates alternées de carreaux et boutisses de la moitié nord du rempart ouest de Doura-Europos: toutes les épaisseurs de strates sont utilisables (© J.-C. Bessac, CNRS).

permettent d'obtenir facilement des hauteurs d'assises plus importantes et régulières.¹⁷ En outre, la meilleure finesse et l'homogénéité des cristaux du gypse facilitent des traitements de finitions des parements plus élaborés. La présentation générale plus soignée des fortifications de ces deux sites, de sept siècles postérieurs à l'enceinte de Doura-Europos, ne résulte donc pas uniquement de leur écart chronologique.

Les formations massives de roches tendres homogènes offrent de meilleures possibilités pour une production de blocs modulaires dans leurs trois dimensions. La variété la plus répandue sur les côtes de la Méditerranée est la calcarénite marine, dite aussi « grès dunaire » ou « grès de plage ». ¹⁸ Sur le sol de carrière, les carriers inscrivent son plan d'extraction dans un canevas orthogonal de tranchées étroites ou « havages », dont les dimensions des mailles sont liées à une unité de mesure. Les calcaires coquilliers tendres des mers du Tertiaire offrent à peu près les mêmes avantages techniques. Tel est le cas des carrières des remparts hellénistiques de Marseille, Saint-Blaise et Glanum, dans la basse vallée du Rhône.

Dans les chantiers d'extraction de pierres tendres pour les fortifications hellénistiques, une coudée de 52,5 cm est communément utilisée, notamment à Apollonia de Cyrénaïque et à Marseille.¹⁹ À Doura-Europos, cette même mesure correspond à la largeur des blocs et son double

¹³ Bessac 1993, 303–6.

¹⁴ Ginouvès & Martin 1985, pl. 23 fig. 2–3.

¹⁵ Bessac & Leriche 1992, 74–5; Bessac 2004b, 239.

¹⁶ Bessac & Leriche 1992, 75; Bessac 1997, t. II, 83 et t. III, pl. T14 fig. 1–4.

¹⁷ Lauffray 1983, 178 fig. 39; 188–9 fig. 49–50.

¹⁸ Communément nommée « beach rock » en anglais, « ramleh » en arabe, « poros » en grec.

¹⁹ Hallier 1986, 261.

à leur longueur, mais leur hauteur est variable puisque dépendante de l'épaisseur des strates gypseuses.²⁰ Dans les affleurements homogènes, elle est adaptée à la profondeur optimale que peut creuser un carrier à l'aide d'un pic d'extraction en ne laissant que l'espace nécessaire pour loger sa jambe dans la tranchée, soit de 9 à 13 cm environ.²¹ La hauteur d'une coudée convient donc assez bien dans ce sens. Pour des composantes plus prestigieuses, en particulier les portes, cette hauteur peut être proche du double, les tranchées d'extraction étant alors un peu élargies.

Lorsque les murs sont édifiés sur de telles roches tendres, il est possible de réaliser des remparts mixtes, en partie rupestres à leur base et en partie construits au-dessus. Plusieurs fortifications côtières du Liban, de Syrie et de Chypre, présentent ainsi un socle taillé dans la roche massive en intégrant la progression de l'extraction au plan de l'enceinte. La facilité de travail de ce type de matériau concerne aussi le creusement de dispositifs de défense inhabituels, bien illustré par les pseudo-poternes rupestres de Nea Paphos. Leur accès extérieur a été volontairement laissé inachevé, afin de rester caché derrière une fine paroi de roche à la base du rempart hellénistique maritime.²² À l'extérieur, seule la roche massive du socle rupestre était donc apparente initialement. Les défenseurs groupés à l'arrière, au fond de la galerie, n'avaient qu'à briser la paroi d'un coup de masse pour sortir par surprise, là où les assaillants les attendaient le moins.

LA TOPOGRAPHIE: UN ÉLÉMENT IMPORTANT DU CHANTIER

Le plan des fortifications et parfois leur appareil sont aussi fortement influencés par la topographie du site. Les fortifications de bord de mer s'adaptent aux lignes de la côte et il en est de même dans les terrains accidentés de l'intérieur des terres, où la rupture de pente des éminences joue un rôle similaire. Parfois, une pointe rocheuse saillante ou très résistante contraint les constructeurs à modifier la forme ou les dimensions



Fig. 6 Promontoire de roche très dure ayant motivé la construction d'une tour circulaire, isolée parmi les exemplaires quadrangulaires du rempart ouest de Messène (© J.-C. Bessac, CNRS).

d'un corps de bâtiment (tour, saillant, etc.) par rapport aux normes communes d'une enceinte afin de l'adapter à l'éminence, sans affaiblir la construction ou le système de défense. La tour pentagonale de Doura-Europos paraît correspondre à cette situation.²³ Il en est de même pour les deux tours circulaires du rempart ouest de Messène, en particulier l'exemplaire inférieur. Celle-ci est implantée sur une petite avancée rocheuse très dure, qu'il aurait été trop long d'araser et qui aurait affaibli une tour carrée du même modèle que les autres exemplaires de ce site (Fig. 6).²⁴

En bordure de falaises abruptes et instables, il était indispensable d'utiliser pour le socle des remparts des appareils à longues boutisses, de manière à bien ancrer les murs dans la partie stable *intra muros* du substrat. Pour les mêmes raisons, certaines fortifications hellénistiques, notamment celles de Doura-Europos, sont conçues avec des raidisseurs internes.²⁵ Ceux-ci ont été parfois assimilés à des murs de casemate, alors qu'ils jouent le même rôle de stabilisation que des boutisses longues.

²⁰ Bessac 1997, t. 2, 75 et 106-9; t. 3, pl. T 20.

²¹ Bessac 1996, 211 et 312: à partir des données obtenues dans des pierres tendres pour des blocs de 0,525 m de haut (une coudée), deux coudées de long et une coudée de large, on peut désormais proposer une production moyenne de quatre blocs par jour et par carrier.

²² Autrefois interprétées comme des galeries destinées à faciliter des sorties répétées en plusieurs points (Balandier 2001, 38-9), il faut désormais voir là un dispositif rupestre inédit: Bessac 2012b.

²³ Bessac 1997, t. 1, 283-5.

²⁴ Recherches inédites réalisées dans le cadre du projet « Die Stadtmauer von Messene » dirigé par le Dr. Silke Muth.

²⁵ Bessac 1997, t. 2, 62-4; t. 3, pl. T 8 fig. 1-3.

L'ORGANISATION DE L'APPROVISIONNEMENT EN PIERRE

Les possibilités d'approvisionnement en pierre de taille constituent le quatrième point clé à prendre en compte. Son importance est telle qu'il pourrait figurer en tête, à la suite des ressources géologiques; sa position dans l'étude n'est donc pas hiérarchique, elle tient davantage à la chronologie des étapes du chantier. Une fois l'inventaire des matériaux réalisé avec leurs possibilités d'emploi dans les murs (format des blocs, types d'appareil, mode de production, etc.), il convient d'étudier toutes les modalités d'approvisionnement: carrières sur place, nécessité d'un transport terrestre, fluvial ou maritime, prise en compte des difficultés topographiques entre l'affleurement et le chantier de construction. Dans les très grandes enceintes, on constate parfois que deux roches très différentes sont employées simultanément, selon la position des murs par rapport aux carrières. Par exemple, à Messène, un calcaire très résistant et un calcaire tendre sont utilisés en même temps, dans la moitié nord de l'enceinte pour le premier et à l'opposé pour le second.²⁶ Le calcaire dur, qui constitue presque partout le substrat de la partie nord, est aisé à extraire, mais sa taille exige beaucoup plus de temps que le calcaire tendre. Ce dernier est produit à 5 km du site et, bien que son transport ne rencontre pas d'obstacles particuliers, cela génère un surcoût. Toutefois, celui-ci est très largement compensé par le gain de temps réalisé lors de la taille des blocs de calcaire tendre. Lorsqu'il existe des possibilités d'approvisionnement par voie fluviale ou maritime, comme à Marseille pour les remparts hellénistiques,²⁷ un transport de la pierre tendre sur une

assez longue distance (environ 35 km) reste toujours compétitif face au calcaire froid local du substrat de la ville, qui est particulièrement difficile à tailler.

Aux possibilités d'approvisionnement en pierre, il faut associer les questions de stockage, au pied des murs, des blocs bruts en attente d'être taillés et mis en œuvre. De nombreuses villes antiques ont décidé la construction de leur enceinte en pierre alors que leur développement urbain était déjà très étendu et ne laissait pas beaucoup de place entre l'habitat existant et les murs, comme à Doura-Europos, du côté de son rempart ouest. Il fallait donc organiser un système de production à « flux tendu »,²⁸ de manière à éviter l'étouffement du chantier par un stockage des blocs mal maîtrisé. Ici aussi, les facteurs espace et temps entrent en jeu simultanément.

Pour identifier cette catégorie de problème de gestion du chantier, il faut intégrer les données de l'étude de l'urbanisme et des voies de desserte de la proche région à celle des défenses. En outre, il existe aussi parfois des indices archéologiques comme les marques d'équipes de carriers, qui permettent d'appréhender certains aspects de l'approvisionnement et de son organisation (Fig. 7).²⁹ L'importance et la cohésion des arrivages de lots de pierres sont décelables en observant la continuité ou la rupture des caractères lithostratigraphiques des blocs dans les assises. Les joints stylolithiques présentent fréquemment des formes dentelées suffisamment spécifiques pour permettre de vérifier si les blocs proviennent d'une même strate (Fig. 8); ils sont donc



Fig. 7 Marque d'équipe de carriers sommairement incisée sur un parement brut d'extraction de la porte de Palmyre à Doura-Europos (© J.-C. Bessac, CNRS).



Fig. 8 Alignement de joints stylolithiques très fins sur des parements de la première tour au nord de la porte d'Arcadie à Messène (© J.-C. Bessac, CNRS).

²⁶ Voir *supra* note 24.

²⁷ Guéry, Troussset & Hallier 1985, 25-8.

²⁸ Méthode visant à alimenter une chaîne de travail en temps voulu coordonnée avec la vitesse de production, afin d'éviter les stocks.

²⁹ Guéry, Troussset & Hallier 1985, 34-5; Bessac 1989, 49-50; Bessac 1997, t. II, 242.

particulièrement utiles pour l'identification des arrivages et des mises en œuvre de pierres groupées dans leur position de carrière.

Les calculs de productivité de chaque équipe de spécialistes (carriers, transporteurs, tailleurs de pierre et poseurs) sont déterminants dans cette phase de l'approche. Sachant que pour les poseurs, la principale contrainte est la place disponible sur la courtine ou sur les murs d'une tour, en remontant le processus de production, il faut calculer le nombre de tailleurs de pierre, d'unités de transport (chariots, embarcations) et de carriers nécessaires à un approvisionnement sans rupture et sans stocks superflus. Si l'on reprend l'exemple des parements de l'élévation des courtines du rempart ouest de Doura-Europos, pour lesquels la stratégie de construction est assez bien définie, pour cinq poseurs et leurs manœuvres travaillant sur le mur, il faut compter huit carriers, un tailleur de pierre et un transporteur.³⁰ Les données de productivité nécessaires à cette estimation ont été établies en calculant des moyennes pondérées de temps de travail, à partir des résultats de l'archéologie expérimentale,³¹ des enquêtes ethnoarchéologiques³² et de l'expérience des métiers de la pierre acquise par le soussigné.

LES QUALITÉS ET LES DÉFAUTS TECHNIQUES DES ROCHES

La détermination des variétés de roches disponibles, y compris les nuances techniques internes à un faciès

géologique bien défini, est indispensable pour bien comprendre les choix des constructeurs et pour évaluer les difficultés de la taille et surtout sa durée. Reconnaître l'emploi d'un calcaire coquillier, d'un marbre, d'un granite, d'un schiste, etc., est nécessaire, mais il faut pousser les investigations plus loin. Si l'on examine une roche récente aussi commune que la calcarénite marine, on constate que sa résistance et son grain varient beaucoup verticalement selon sa profondeur dans le substrat, mais aussi latéralement, selon sa position sur la côte. Bien que très tendre et facile à tailler, d'une façon générale, elle peut être fortement indurée en surface et comporter des éléments siliceux assez grossiers par endroits, voire s'apparenter à un conglomérat difficile à travailler.³³ C'est ainsi que, dans les carrières du Cap Bon, à 60 km des murs de Carthage,³⁴ des défauts de surface ont contraint les constructeurs à exploiter une large partie de cette roche en souterrain sous la forme de puits (Fig. 9). Il semble en être de même pour une partie des blocs des remparts hellénistiques de Nea Paphos qui proviennent certainement des carrières souterraines contemporaines situées *intra muros*.³⁵

Des variations comparables de la qualité du matériau existent aussi dans d'autres roches. Dans les affleurements de gypse de Doura-Europos, quatre variétés techniques bien distinctes et réparties dans diverses strates ont été exploitées pour le grand appareil des murs. Chacune d'elles a été employée dans les fortifications en fonction de ses qualités propres. La meilleure a été utilisée à l'intérieur des tours et pour les linteaux monolithes, la



Fig. 9 Vestiges tronqués verticalement de la carrière du Cap Bon, exploitée en puits dans la calcarénite marine pour la ville de Carthage (© J.-C. Bessac, CNRS).

³⁰ Bessac 1997, t. 2, 256 tableau 2.

³¹ Bessac 2004a, 81–8.

³² Bessac, Abdul Massih & Valat 1997, 159–97.

³³ Bessac 2012c, 173–4.

³⁴ Paskoff & Troussset 1995, 60–1.

³⁵ Bessac 2012b (sous presse).

deuxième, un peu moins fine, a été surtout réservée aux parements extérieurs des socles et aux grandes portes, la troisième, assez grossière, constitue les élévations des tours et courtines; quant à la plus médiocre, elle est employée essentiellement dans le remplissage des murs.³⁶

LES QUALITÉS TECHNIQUES DE L'OUTILLAGE

La qualité technique des outils et leur adaptation à la catégorie de pierre utilisée sont évaluées par l'analyse de leurs impacts. Cette étude permet d'identifier chaque type d'outil, de déterminer son mode de percussion et ses aménagements, en particulier s'il est forgé de dents. Leur façonnage nécessite un bon aciérage du fer et une excellente maîtrise sidérurgique pour éviter leur torsion ou leur cassure sur les pierres dures.³⁷ Bien que les outils à dents destinés au travail de la pierre soient connus depuis le VI^e siècle av. J.-C., leur usage au Proche-Orient ne se généralise vraiment que sous la domination romaine, vers la fin du I^{er} siècle av. J.-C.³⁸ On constate, par exemple, que les traces de tranchants dentés sont rarissimes sur le rempart hellénistique de Doura-Europos (II^e siècle av. J.-C.), alors qu'elles sont généralisées sur les constructions de l'époque de Trajan. Dans la même région, des remparts proto-byzantins, comme ceux de Halabyya-Zenobia ou de Resafa, présentent presque uniquement cette catégorie de traces (Fig. 10). Ce progrès technique apparaît en Occident au début du règne d'Auguste.³⁹ Toutefois, il ne concerne pas les pierres granuleuses ou très vacuolaires (grès, calcaires coquilliers grossiers) et les roches trop résistantes (basalte, granite, calcaires froids).

En général, l'outillage des constructeurs de fortifications hellénistiques était bien adapté à des pierres tendres ou fermes. Cependant, les Romains ont bénéficié d'outils de qualité bien supérieure qui leur permettaient de tailler précisément des pierres beaucoup plus dures dans des conditions optimales. Cette différence est également valable pour les pics d'extraction romains dont l'évolution technique a facilité un creusement plus profond et plus rapide des havages. Ces carriers pouvaient donc produire des blocs quadrangulaires de hauteur d'assise plus importante, tout en respectant le sens des lits de carrière,⁴⁰ même dans des roches résistantes, comme les calcaires durs et froids utilisés dans les remparts de Cyrrhus.⁴¹

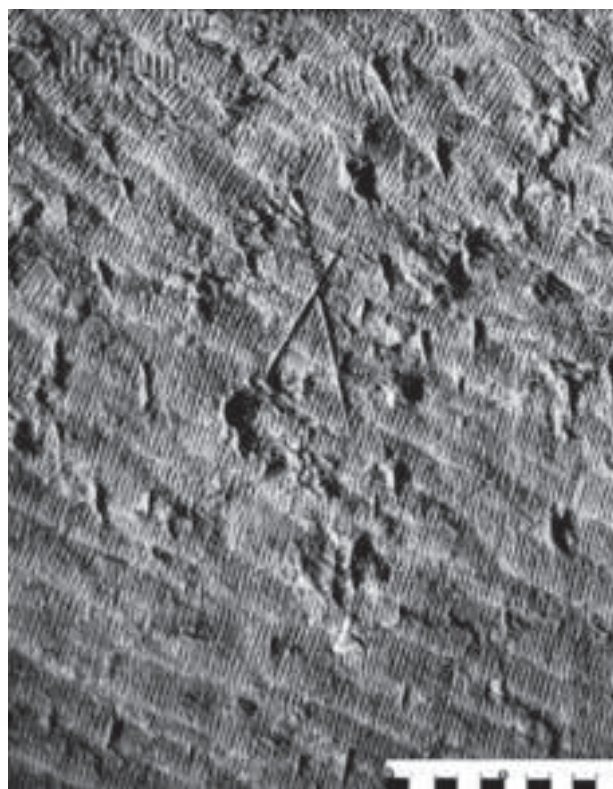


Fig. 10 Traces de dents de ciseau grain d'orge et marque identitaire sur un parement des fortifications proto-byzantines d'Halabyya-Zenobia (© J.-C. Bessac, CNRS).

LE NIVEAU TECHNIQUE DES ÉQUIPES DE CONSTRUCTEURS

Le niveau technique des équipes de constructeurs de remparts en pierre peut être évalué en étudiant le travail des principaux spécialistes: carriers, tailleurs de pierre et poseurs. Dans les chantiers d'extraction, un examen comparatif des fronts et des sols de carrière peut donner une idée de la maîtrise du métier des carriers. Les principaux critères à prendre en compte sont la régularité de la verticalité des fronts, l'intégration des divisions et défauts naturels de la roche (joints stratigraphiques, fissures, veines calcitiques ou marneuses, etc.) dans les canevas d'extraction, les empreintes de ratés d'extraction, les blocs refusés, etc. Au sommet des affleurements de calcaire dur ou froid érodés sous la forme de lapiaz, il faut évaluer les capacités d'adaptation des constructeurs à la

³⁶ Bessac & Leriche 1992, 75; Bessac 1997, t. 2, 108.

³⁷ Bessac 1986, 92 et 172.

³⁸ J.-C. Bessac, recherches inédites en cours.

³⁹ Bessac 1999, 29-30.

⁴⁰ Bessac 1991, 102-3; Bessac 1996, 210-4.

⁴¹ Bessac 2012a, 192; Bessac 2013.

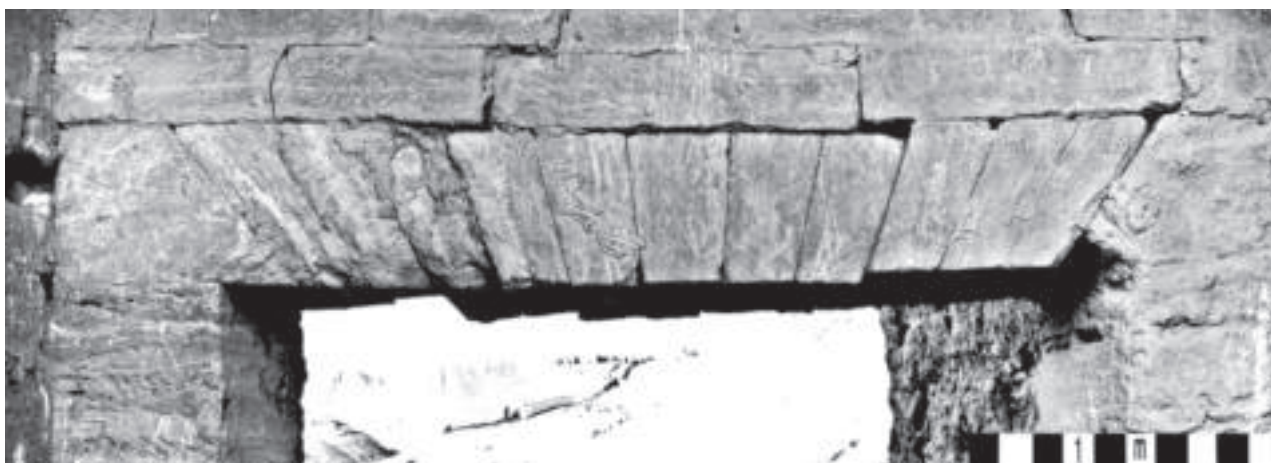


Fig. 11 Plate-bande appareillée de la porte centrale de la citadelle hellénistique de Doura-Europos (© J.-C. Bessac, CNRS).

diversité et à la complexité des formes et des volumes de la roche superficielle. Correctement exploité, un tel affleurement offre un sol assez bien aplani qui contraste avec l'aspect très accidenté des secteurs naturels environnants. Les murs sont alors souvent composés d'un appareil polygonal. Une bonne qualification des carriers et des tailleurs de pierre/poseurs⁴² est prouvée lorsque les blocs polygonaux ne présentent qu'un minimum de retouches par rapport à leur état naturel ou de fracture primaire⁴³ et que leurs joints s'adaptent très bien. Si les parements présentent de multiples retouches et des joints irréguliers comblés d'éclats, cela signifie que les constructeurs étaient mal préparés à ce travail. Tel est le cas des remparts du V^e et surtout du IV^e siècle av. J.-C. à Ampurias sur la côte de la Catalogne espagnole.⁴⁴

La qualité professionnelle des constructeurs se mesure aussi à la complexité et à la précision de la coupe des pierres des composantes architecturales spéciales, comme les plates-bandes appareillées des portes des fortifications de Doura-Europos (Fig. 11). Dans cet exemple, l'assemblage des claveaux est quasi parfait, mais le rayonnement des joints en coupe est trop court, obligeant ainsi la taille d'angles aigus trop fragiles.⁴⁵ Cette maladresse traduit ici la nouveauté de cette technique d'appareillage encore mal maîtrisée par des tailleurs de pierre pourtant chevronnés. Au sommet des escaliers des tours du rempart nord de Halabya-Zenobia, on constate que le niveau de connaissances géométriques des constructeurs est insuffisant pour réaliser une bonne



Fig. 12 Exemple de pénétrations de voûtes au sommet de l'escalier d'une tour du rempart nord de Halabya-Zenobia (© J.-C. Bessac, CNRS).

⁴² Dans ce type d'appareil, c'est d'habitude le même ouvrier qui s'occupe des deux tâches.

⁴³ Fracture d'extraction à la base du bloc (ou débitage, s'il s'agit d'une pierre erratique).

⁴⁴ Bessac 1993, 304–5 fig. 4 et 9.

⁴⁵ Bessac 1997, t. 2, 149–151; t. 3, pl. C103 fig. 283 et C121 fig. 352.

jonction de voûtes complexes (Fig. 12). D'une manière plus générale, il semble que les parties les plus délicates des fortifications, les encadrements d'ouvertures, étaient confiées à des équipes de spécialistes.

LES CONDITIONS D'EXÉCUTION DU CHANTIER

Les conditions climatiques et environnementales influencent la rapidité de la progression des chantiers des fortifications. Dans des contrées comme le sud de la Syrie, pendant l'été, la température sous abri atteint fréquemment 50° C. Les chantiers étant rarement à l'ombre, tant dans les carrières qu'au pied des murs, le travail doit s'arrêter l'été en milieu de journée ou, pour le moins, ralentir très sensiblement.

Dans les fortifications de cette région (Doura-Europos, Halabya-Zenobia, Resafa, etc.), du mortier de plâtre grossier (ou *djousse*) est employé entre les blocs. Lorsqu'il est utilisé sous une trop forte chaleur, il se déshydrate trop vite et perd une grande partie de sa résistance. Il faut donc soit l'humidifier constamment pendant la journée, soit n'utiliser ce mortier qu'aux heures les moins chaudes. Cette règle est plus stricte pour les mortiers de chaux qu'il faut maintenir humides pendant au moins une semaine en été, pour éviter qu'ils ne perdent leur résistance.

Le caractère très abrupt de certaines constructions, notamment les défenses situées en bordure de falaises, ralentit certainement les chantiers du fait des précautions prises par les travailleurs pour éviter les accidents. Les textes sont muets sur ce thème, mais des traces d'implantation de pieux en bordure d'une plate-forme rupestre provisoire d'un grand chantier rupestre nabatéen inachevé d'Hégra en Arabie Saoudite,⁴⁶ révèlent que des mesures de sécurité assez longues à mettre en œuvre étaient prises dans l'Antiquité lorsqu'il existait des risques. Ces dispositions devaient donc occasionner des pertes de temps.

Conclusion et perspectives

La présente liste de thèmes est loin d'être exhaustive et plusieurs points n'ont été qu'effleurés. Tel est le cas des marques lapidaires dont on commence à

admettre que l'étude de leurs fonctions techniques et identitaires est fondamentale pour comprendre les chantiers de fortification. Ces marques concernent toutes les étapes de la construction, de la carrière à la réception finale de l'ouvrage ou de chacune de ses tranches. Une contribution entièrement consacrée à ce thème ne suffirait donc pas à l'épuiser. Il en est de même pour les appareils des fortifications, bien que les options retenues soient indissociables des caractères lithologiques et surtout lithostratigraphiques des roches disponibles, ainsi que pour divers facteurs techniques, économiques et esthétiques plus ou moins prédominants qui interviennent aussi dans le choix des constructeurs. Mais il était plus utile ici d'insister sur les points les plus délaissés dans les investigations archéologiques.

La notion de temps de réalisation ou de délais de livraison existe pour toutes les constructions actuelles et pour celles du passé, mais elle est particulièrement cruciale dans le domaine des fortifications. L'édification d'un temple peut éventuellement se prolonger durant plusieurs décennies alors que c'est rarement le cas des remparts. Au-delà des contingences financières, cet impératif de temps s'impose au constructeur de fortifications, dicte ses choix initiaux et l'oblige parfois à les modifier, voire à les abandonner. C'est ainsi qu'il peut arrêter la pierre au profit de la brique crue dont la technicité et les délais de production sont nettement moindres.⁴⁷ Mais les indices matériels d'une accélération d'un chantier ne sont pas toujours faciles à déceler et surtout à interpréter. Tel est le cas des changements d'appareil ou de la qualité des pierres. Si l'on privilégie les temps de réalisation, le choix des appareils des murs dépend de trois autres facteurs: les caractères lithostratigraphiques de la roche, leur évolution en profondeur et les variations des difficultés d'extraction, de taille et de mise en œuvre entre les divers sous-faciès géologiques qui existent souvent au sein d'un même affleurement. À ce stade des investigations, même un spécialiste de la pierre doit recourir à des approches complémentaires qui lui permettent d'étayer, de tester ou de mieux définir ses hypothèses. Il s'agit essentiellement d'enquêtes ethnoarchéologiques et de l'archéologie expérimentale. Ces deux domaines de la recherche lui sont particulièrement accessibles du fait de sa position professionnelle. Il peut donc les pratiquer avec tout le recul critique nécessaire que lui autorise son expérience dans le métier. Dans notre société, il est illusoire de

⁴⁶ Recherches en cours de publication dans le cadre du « Saudi-French Archaeological Project at Mada'in Salih ».

⁴⁷ Gelin 2010, 437–50.

vouloir former suffisamment de professionnels de la pierre à l'archéologie ou, au contraire, de former des archéologues aux métiers de la pierre pour répondre aux besoins de la recherche. Il est vrai, néanmoins, qu'il est possible d'organiser des recherches en collaboration entre les deux spécialités, en particulier pour l'étude de la construction des fortifications, et c'est probablement la solution la plus prometteuse actuellement.

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FORTIFYING A MAJOR EARLY BRONZE AGE CENTRE: THE CONSTRUCTION AND MAINTENANCE OF TELL CHUERA'S (NORTHERN SYRIA) OUTER DEFENCE WORKS

Tobias B.H. Helms & Jan-Waalke Meyer

Abstract

This paper explores the construction of Tell Chuera's outer defence works and their context by referring to hitherto unpublished data from an excavation area in the site's lower town (area W). Tell Chuera – an early urban centre of the 3rd millennium BCE (early Bronze Age, hereafter EBA) – is located in the dry-farming plains of the western Jezirah in northern Syria. It includes approximately 70 hectares of walled space and belongs to a group of circular cities, which are characterized by a radio-concentric urban layout. A growing number of circular sites have been identified in the Jezirah region and – more recently – in central Syria.¹ In the mid- to late 3rd millennium Tell Chuera featured an inner and an outer city wall. Between 2008 and 2010 a larger section of the site's outer defence system was explored in excavation area W by applying a combined horizontal and diachronic fieldwork approach. Excavation area W represents one of the largest horizontal exposures of an EBA city wall throughout the Jezirah region. This article addresses the main components of the recently excavated defensive structures. Focusing on the mid- to late 3rd-millennium construction phases, a sequential analysis of the building process is presented. By referring to an interpretation of comparative field data it is further argued that the use of different construction techniques and building materials as well as the observed relationship between the city wall and adjacent domestic structures point towards decentralized aspects of the fortification works and an implementation of different technological decisions. A possible explanation for the observed diversity is the impact of community decision making processes during the construction work, which might be attributed to the contribution of different work crews or neighbourhoods participating in the building process.

Introduction

Throughout Syro-Mesopotamia the emergence of densely populated, nucleated and fortified sites is a hallmark of 3rd-millennium BCE urbanism. During this period,

which was characterized by the rise of city states and early territorial states,² fortification systems developed from simple mud brick-built enclosures into increasingly complex arrangements of defensive elements that came to include features like sloped ramparts, bastions,

¹ Meyer 2010a; Castel & Peltenburg 2007.

² Akkermans & Schwarz 2003, 233–77; Sallaberger 2011, 319.

defended gates and regional defence systems.³ In this paper we will focus on the construction of Tell Chuera's outer fortification wall, which surrounded the site's lower town in order to trace the actual building process and the integration of the defence works in the urban environment. Further we will elaborate on organizational and socio-economic aspects of fortifying a large EBA city. Our approach is based on a sequential analysis of the building process, assessing the differentiable stages of construction. In this connection we will mainly refer to hitherto unpublished field data from excavation area W. This archaeological operation is located in the eastern extent of Chuera's lower town and covers residential areas, parts of the site's road system as well as a larger section of its outer defence works (areas W-4 and W-6).⁴ By discussing the sequence of fortification, our aim is to contribute to a better understanding of Chuera's fortification in the wider context of EBA military architecture.⁵

The archaeological context: An early urban centre in the dry-farming plains of the Jezirah

Tell Chuera⁶ is located in the plains of northern Syria, a region which is also known as the western Jezirah (Fig. 1). In this environment average annual rainfall allows rain-fed agriculture, yet – then and now – recurring periods of drought challenge opportunities to sustain sedentary ways of life. It is widely assumed that subsistence patterns of the EBA communities throughout this region relied on a well adapted mode of agro-pastoralism.⁷ The herding of large flocks of sheep and goats could compensate for drought-related crop failure and facilitated the



Fig. 1 The location of the sites of Tell Chuera and Kharab Sayyar (Hempelmann 2013: Abb. 2).

expansion of economic activities beyond the limits of the area of cultivated fields that surrounded the individual sites. Together, dry-farming and pastoralism created an economic basis for feeding larger populations, generated surpluses that gave rise to urbanism in a marginal zone and allowed the realization of resource intensive projects, of which the construction of extensive fortification systems is an example.

The Bronze Age settlement of Tell Chuera was – according to the recent state of research – founded *ex nihilo* at the place of an abandoned late Chalcolithic site⁸ around 3100–3000 BCE (i.e. local period Tell Chuera IA).⁹ In the course of the 3rd millennium BCE Chuera reached a size of approximately 70 hectares of walled space and thus developed into one of the largest contemporaneous

³ Cooper 2006, 78–85.

⁴ Meyer *et al.* in preparation. The excavations at Tell Chuera were directed by Jan-Waalke Meyer. Archaeological fieldwork in area W-4 was supervised by Tobias Helms (2008–9) and Babak Rafiei-Alavi (2010), area W-6 was explored by a team under the supervision of Anne Birte Binder.

⁵ We would like to thank Henrike Backhaus, Caitlin Chaves Yates, Federico Buccellati, Jörg Becker, Ralph Hempelmann, Susanne Schröder, and Alexander Tamm for their useful comments and suggestions. We would also like to thank Philippe Quenet for the opportunity to discuss the defensive elements of Tell Chuera in comparison to the findings from Tell Al-Rawda with him.

⁶ Archaeological research at Tell Chuera has been funded by the German Research Foundation (DFG), the Oppenheim Foundation and the Enki e. V. association and forms a component of the French-German Badiyah-Project (ANR/DFG) which focuses on the phenomenon of circular settlements in the marginal areas of Syria. Excavations at Chuera were carried out by a team of archaeologists of the Goethe-University (Frankfurt am Main) and local work crews under the direction of J.-W. Meyer. For general information on the most recent excavation results refer to Meyer (ed.) 2010; Meyer 2011b; Hempelmann 2013; Helms & Tamm 2014; Meyer *et al.* in preparation.

⁷ Wilkinson 1994; Wossink 2009.

⁸ The dating of the Late Chalcolithic levels which has been reached in several deep trenches is still a matter of debate. A preliminary assessment of ceramic finds suggests that the Chalcolithic settlement might have been abandoned already around 4000 BCE that is Late Chalcolithic 2 (T. Babour in Hempelmann 2013).

⁹ EBA I or EJZ 1 (see Table 1).

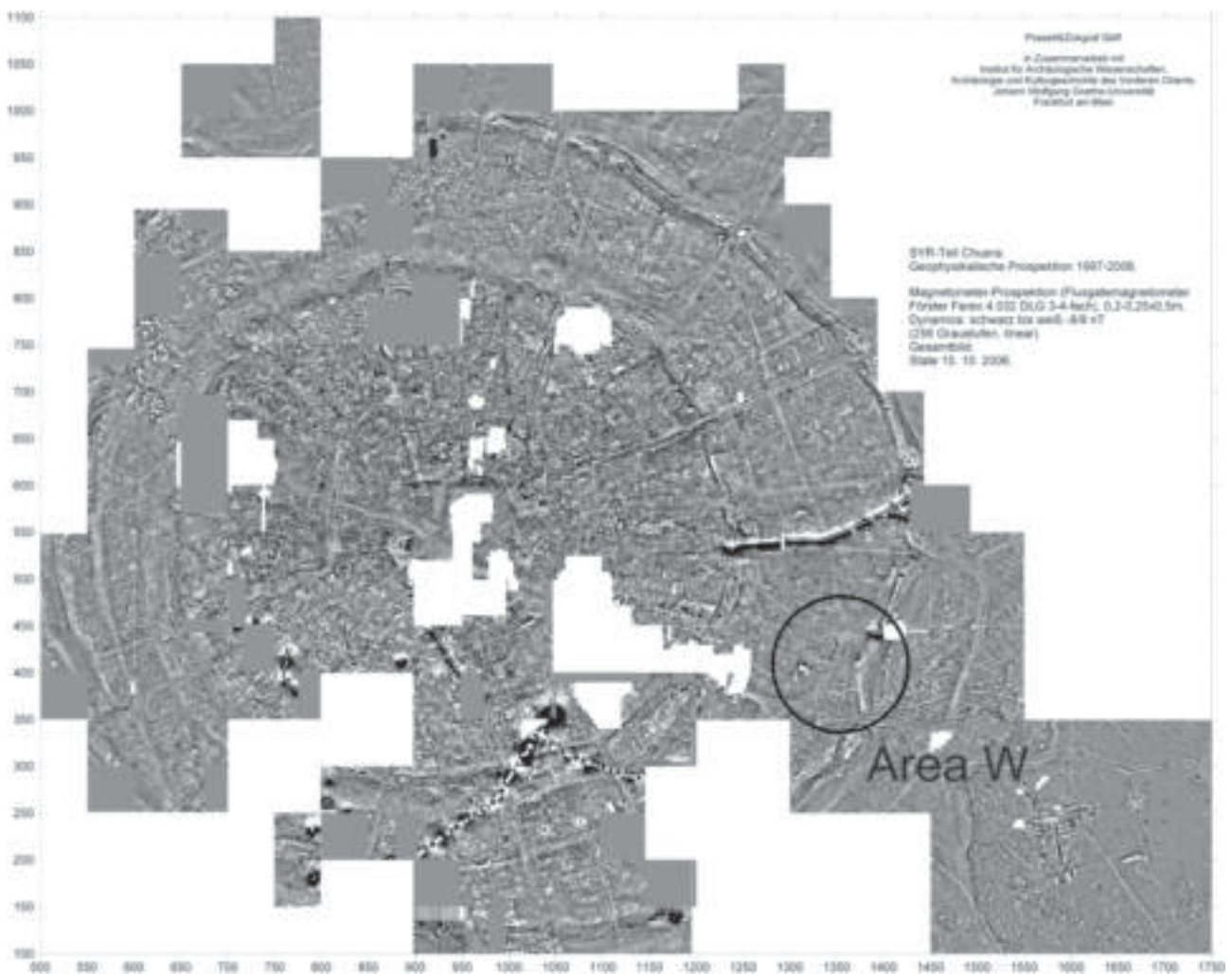


Fig. 2 Geomagnetic plan of Tell Chuera (Posselt & Zickgraf Prospektionen GbR; image is property of the Tell Chuera excavation team).

sites of northern Syria.¹⁰ It has been suggested that the mid- to late 3rd-millennium (local period TCH ID)¹¹ settlement might be identified with Abarsal, a city state and rival of the Eblaite state, mentioned in Ebla's (modern Tell Mardikh) royal archives.¹² Yet, in spite of decades of archaeological fieldwork, no cuneiform texts or inscriptions have been found at Chuera. Unlike the situations at Tell Beydar (ancient Nabada) to the east or Ebla to the west, it seems quite possible that a writing system was not employed at

Chuera during the 24th century BCE, when the south Mesopotamian practice of cuneiform writing was adopted for administrative purposes in some places in the north.¹³ Strictly speaking we therefore are dealing with the remains of a historically anonymous site in the case of Tell Chuera. However, the sheer size of the settlement, survey-based evidence for its significant role within a hierarchically structured settlement system, and archaeological evidence for the existence of central political institutions – a palatial complex (excavation

¹⁰ Meyer 2010a.

¹¹ EBA IVA or EJZ 3 b–4 b (see Table 1).

¹² Archi 1989; Milano 1995, 1228; Ristvet 2011, 3–4. Other large Syrian and Anatolian tells, for example Kazane Höyük, were also identified with Abarsal. For a summary on the 'Abarsal-debate' is provided by Creekmore (2008, 45–6, 93–5).

¹³ For a recent survey on the historical and epigraphical evidence of the late 3rd-millennium Jezireh see Sallaberger 2011.

Table 1 Simplified chronological framework. The table lists the local periods of the 3rd millennium in the Chuera-region, the *Early Jezirah*-periodization of the Arcane-project, and the Early Bronze Age-chronological framework,^{*} and the construction phases of the outer fortifications in area W-4.

Approx. date (BCE)	Local period (Tell Chuera)	EJZ (Arcane)	EBA (Syria)	Construction phases of the outer city wall in area W-4
after 2100	–	EJZ 5	FBZ–MBZ	site abandoned
after 2300	IE	EJZ 4a–4c?	FBZ IVB	no outer defence system
after 2465	ID	EJZ 3b–4a	FBZ IVA	phase 1 and phase 2
after 2600	IC	EJZ 2 final–EJZ 3a	FBZ III	phase 3
after 2800	IB alt, IB jung	EJZ 2	FBZ II	
after 2900	IA/IB	EJZ 2	FBZ I–II	
after 3100	IA	EJZ 0–1	FBZ I	

^{*} Table 1 is based on synchronizations and chronological tables in Hempelmann 2013, 163–85, especially Tabelle 47; Meyer 2010a, 14; Pruß in Lebeau 2011a, 12, table 1; Lebeau 2011b, esp. 379–80, table 1; 2; Quenet 2011, esp. 23, table 1; Akkermans & Schwarz 2003, esp. 215, 236, fig. 7.3; fig. 8.2.

area F) and monumentalized ceremonial structures (especially in excavation areas A and D) – indicate that the site was a major player amongst the early state level polities of Upper Mesopotamia during the second half of the 3rd millennium BCE. Geomagnetic mapping and stratigraphic soundings clearly suggest that the evolution of Chuera's townscape can be understood to a considerable extent as a result of urban planning (Fig. 2). The site includes a circular upper town with a radial street pattern and an equally concentric lower town, the latter representing an extension of the original urban layout.¹⁴ The settlement also featured a number of extramural facilities, such as an extended workshop area (area ASA), a ceremonial complex (area L), and – most relevant to the topic of this paper – several rectangular stone foundations on the surrounding hilltops which can be interpreted as remains of watchtowers,¹⁵ suggesting the existence of a regional defence system.

The evolution of Chuera's defence works: A brief overview

In many areas of the tell the outer defensive ring is still discernible today as a rampart-like elevation which contains the eroded structure of the lower city's fortification wall. Until the 1990s little was known about the construction of Chuera's defence works.¹⁶ Since then the outer and inner defences have been examined in several excavation areas (Fig. 3) mostly by means of stratigraphic trenches or relatively small horizontal exposures. In the upper town the fortifications were investigated in area F, where the city wall runs adjacent to the EBA palace, as well as in the south-eastern extent of the upper town (areas H, T and TMS).¹⁷ The defensive ring of the lower town was exposed along the northern (area P–*Stadtmauerschnitt*),¹⁸ western (area Z),¹⁹ southern (area U),²⁰ and most recently along the south-eastern perimeter of the Tell (area W).²¹ Before we discuss the

¹⁴ Meyer 2007a; 2007b; 2010b; 2011a, 129–30; 2011b.

¹⁵ The structures were identified by Veronika Kudlek during her survey of the site's surroundings (Wadi Hamar-Survey). Pottery finds suggest that the structures can be dated to the second half of the 3rd millennium BCE (Veronika Kudlek, pers. comm.).

¹⁶ Orthmann 1990, 11.

¹⁷ For a first assessment of the excavation along the city wall in area H see Falb's field report (2010). The results of the latest excavations in area H and in areas T and TMS have not yet been published.

¹⁸ Novák 1995.

¹⁹ Meyer 2007b; 2010 c.

²⁰ Meyer 2007b; 2010 c.

²¹ Binder and Helms in Meyer *et al.* in preparation.

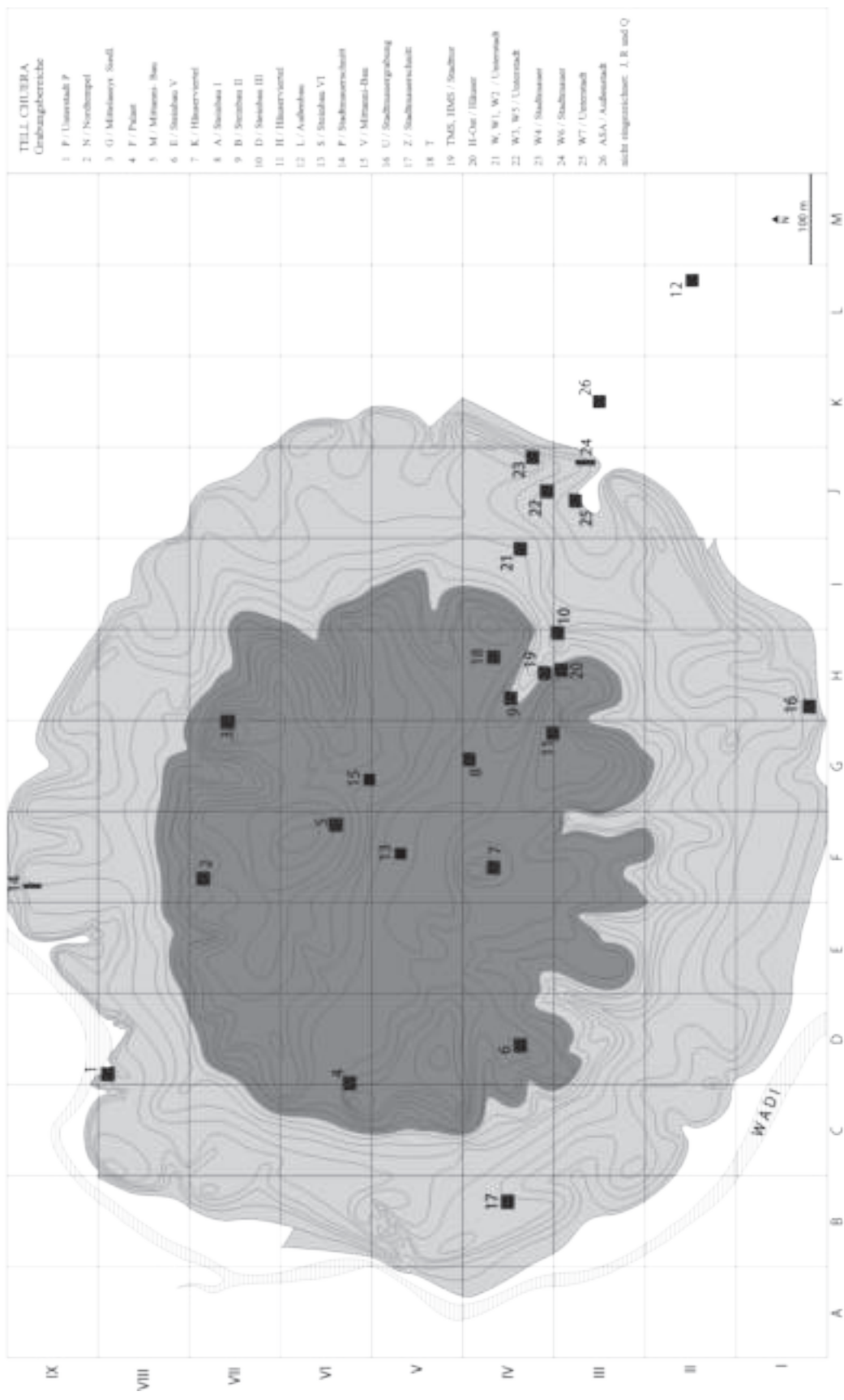


Fig. 3 Location of excavation areas at Tell Chuera (map has been created by various members of the Chuera team in 2011; image is property of the Tell Chuera excavation team).

defensive features uncovered in area W in more detail (see section below), the general makeup and evolution of Chuera's fortification will be briefly summarized on the basis of the current field data.²² Unbaked mud brick constituted the main part of the locally employed construction material. Additionally, gravel, re-used mud bricks,²³ brick debris, loam and household waste were used as building materials and backfill for the construction of the site's defence works. Quarried limestone was utilized selectively, for example, to create the massive stone foundations of a city gate that gave access to the upper town (area TMS), or as footing for a small revetment wall in area P.²⁴

The origins of the defence system can be traced back to the very beginnings of the regional Bronze Age sequence (local period IA, i.e. EBA I). A segment of the initial fortification – a modest mud brick-built enclosure – was uncovered in area H. It surrounded an area of the site that later on developed into the upper town. Towards the end of local period IB urban growth resulted in the formation of the site's concentric lower town. According to observations from a deep sounding in area Z the newly established lower town was fortified with a 5.5 m wide mud brick wall and a supplementary rampart. Gravel filled compartments are an important construction feature of this structure. To the north (area P), the fortification of the lower town initially²⁵ lacked a comparable supplementary rampart.²⁶ Drillings in the area outside of the city wall strongly suggest that the settlement was also encircled by a defensive moat²⁷ that would have created an additional barrier against approaching enemies. Moreover, the excavated spoil could be used as a source of construction material for the city wall and the rampart.

The fortification of the upper town apparently fell out of use after the construction of the outer city wall, when the inhabitants of the site began to utilize it as an intramural burial ground. At that point the defence capacity of the site relied solely on a single line of defence, at least for a certain period.

With the refortification of the upper town during local period IC, Chuera was transformed into a double walled 'citadel city'.²⁸ The mid-3rd-millennium defences of the central mound were maintained and gradually rebuilt over the course of periods IC and ID. The thickness of the excavated mid- to late 3rd-millennium wall sections ranges between 4.2 m (area H) and 6 m (area F). Fieldwork in area H also revealed evidence for a sloped rampart in front of the city wall, which was fortified with a glacis²⁹ of rammed earth. Soon after its construction the glacis was built over by the approaching residential buildings of the lower town.³⁰

In general, period ID was characterized by an extensive refortification of the site's inner and outer defence works. During this period one of the main entrances to the upper town (area TMS) was furnished with a chambered gate that rested upon a massive stone base. In the geomagnetic surface mapping of the site many gaps are discernible along the outer and inner line of the fortification. Not all of these breaches represent the location of city gates though. In the southern extent of the lower town (area U) the existence of sewer tunnels could be confirmed that penetrated the city wall and facilitated the drainage of waste water and excess rain water.³¹ The aforementioned city gate in area TMS also featured an elaborate subterranean drain, which was constructed of massive stone slabs.

²² The site's defence works have been intensively examined over the last twenty years but a synthetic analysis of the archaeological evidence has not yet been accomplished. It will be achieved within the context of a postdoctoral research project (T. Helms, 'Fortress communities of the 3rd millennium BCE').

²³ In some cases the employment of re-used mud bricks could be identified by the occurrence of remnants of plaster.

²⁴ Novák 1995, 173–5; Abb. 87; Taf. 21b.

²⁵ Excavation area P, construction phase 3 (Bauschicht 3).

²⁶ Later on [area P, construction phase 2 (Bauschicht 2)] the outer city wall in area P was also equipped with a sloped embankment, that was massively reinforced during the latest construction phase (area P, construction phase 3 (Bauschicht 3), local period ID).

²⁷ Novák 1995, 175; Weicken & Wener 1995, 288–9; Abb. 109.

²⁸ Cooper 2006, 74–8.

²⁹ We use the term 'glacis' to describe the surface treatment of a sloped rampart not to designate the embankment itself (see Reich & Katzenstein 1992, 316; Burke 2008, 55–6, fig. 6).

³⁰ Falb 2010, 96–7.

³¹ Meyer 2010c, 177, Abb. 3–4.

Excavating Chuera's mid- to late 3rd-millennium outer defences: The example of area W-4

The recent excavations in area W came to include a c. 100 metre long stretch of the outer city wall. As a result, excavation area W represents one of the largest horizontal exposures of an EBA city wall throughout the Jezirah region.³² Additional data derives from a stratigraphic sounding, which was laid out with the aim of revealing the sequence of construction.

The fortifications exposed in area W consist of a 5.5 m high rampart, on which the actual city wall was erected (Fig. 4). Furthermore, the excavations yielded the first on site evidence for the use of bastions along the outer defensive ring (Fig. 5). It also became evident that the outer city wall itself was built as a 'saw-tooth' wall. It is constructed of straight segments which are linked by a series of projections and offsets (Fig. 6). This building technique constitutes a common feature of contemporaneous and earlier defence works in nearby Anatolia.³³ Further elements that could be examined during the excavation include revetment walls, and an earlier city wall which was superimposed by the mid- to late 3rd-millennium (local period ID) structures that are the main focus of this paper.

During period ID the fortifications of Chuera's outer town were reinforced on a massive scale.³⁴ Doubtless the construction and maintenance of the outer defences, which cover a length of approximately 3 km, created an enormous logistical challenge and one is inclined to agree with Ristvet who characterized the fortification of Bronze Age cities as an 'administrative nightmare',³⁵ The same period also saw the monumentalization of the site's ceremonial structures³⁶ and the establishment of an extended palatial complex (area F).³⁷ Together with the reinforcement of the defence works these dramatic



Fig. 4 The outer face of the earthen rampart in area W-4 (construction phase 2, local period Tell Chuera ID). The upper and the lower part of the escarpment are divided by a revetment wall. The surface of the rampart is covered with a glaxis of rammed earth; direction of view: westward (author's photo 2008; image is property of the Tell Chuera excavation team).

changes of Chuera's townscape towards monumentality attest to a locally unprecedented mobilization of labour during period ID.

Interestingly there is evidence for widespread destruction around the mid-3rd millennium BCE at the end of local period IC (i.e. around 2465 cal BC),³⁸ shortly before the outer fortifications were expanded. The destruction

³² For a concise summary of 3rd-millennium BCE defensive architecture in the Jezireh see Pfälzner 2011. For a survey on the contemporaneous fortifications in the neighbouring middle Euphrates region see Cooper 2006 (chapter 4).

³³ De Vincenzi 2008. Novák already considered the possibility of a serrated course of Chuera's defence works (Novák 1995, 15), a suggestion that could be confirmed by our latest excavations.

³⁴ An expansion of the outer defences during period ID could be observed in areas P, W and Z.

³⁵ Ristvet 2007, 202.

³⁶ The site of Chuera is well known for its 'Steinbauten', a group of megalithic structures, which include a monumental staircase (area D) and a raised platform for a ceremonial complex which was constructed from large blocks of stone.

³⁷ Palace F is the largest single building that has been excavated so far at Tell Chuera. A recent assessment of the field data and new excavation data from this archaeological operation indicates the existence of a monumental building in this area that was in use during the previous period IC; the structure implies the possible existence of an earlier palace (Alexander Tamm, pers. comm.).

³⁸ Weninger *et al.* 2010.

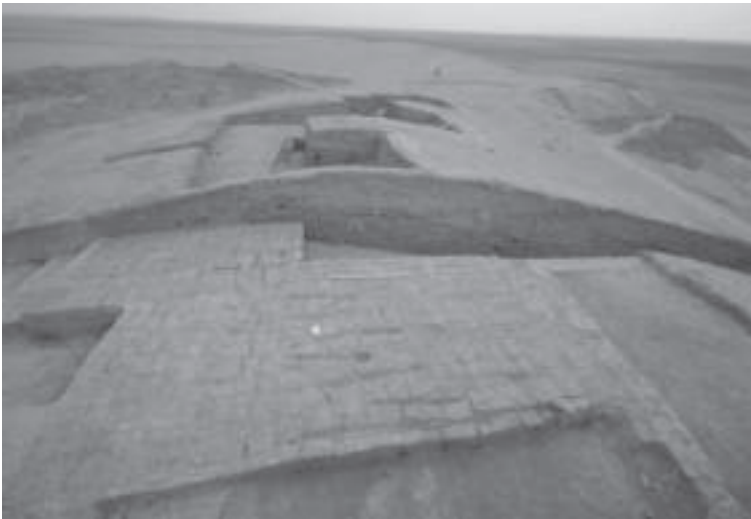


Fig. 5 Large rectangular bastion (Bastion I) in area W-4 (construction phase 2, local period Tell Chuera ID). In front of the bastion a small mudbrick wall is discernible (construction phase 1, local period Tell Chuera ID); direction of view: northward (author's photo 2008; image is property of the Tell Chuera excavation team).

Fig. 6 Overall plan of excavation area W (preliminary version). The plan covers period ID structures within the lower town (areas W-1, W-2, W-3, W-5, W-7) as well as the outer fortifications (area W-4, construction phases 1–2, local period Tell Chuera ID; plan has been created by author and A. Tamm in 2012; image is property of the Tell Chuera excavation team).



layer identified in several excavations areas³⁹ produced evidence for conflagrations and contained numerous human skeletons; obviously the remains of people who had not received a formal burial.⁴⁰ In a recently excavated area of the site (area TMS) several burnt skeletons were found directly on the period IC street level of one of Chuera's main roads, where they had been buried by the rubble of a burnt-out building that had collapsed onto the street. In another excavation area (area A) a bronze dagger, a spearhead and a large flint knife were found amongst the skeletal remains of at least three individuals.⁴¹ These findings can most probably be explained with an eruption of violence and armed conflict at the transition from local period IC to ID during the 25th century BCE.

The destruction layer reminds us of the very purpose of fortifying a place: archaeologists have highlighted symbolic aspects linked to defensive architecture and obviously made a point, that city walls were an important part of the very definition of an urban way of life during the Bronze Age. To an out-of-towner the extent and state of a city's fortification wall communicated a diversity of symbolic messages. A towering fortification looming above the vastness of the plains was a sign of the settlement's prosperity, but would have also been perceived as an expression of political power and an ideological statement.⁴² City walls and gates also channelled and structured the movement of incoming and outbound people and goods. In this respect, enclosures also served as a potential lever to exercise political and economic control.⁴³ While acknowledging

these important aspects we should likewise not diminish the role of Bronze Age defence works as a means of keeping urban communities from harm. According to the recent work of scholars like Burke⁴⁴ and Rey⁴⁵ it appears that the defensive elements of Bronze Age fortifications, like those excavated at the site of Tell Chuera, can be understood primarily as a response to innovations in the field of military technology. Especially the construction of huge earthen ramparts, increasingly employed during the EBA,⁴⁶ was clearly directed against siege warfare. Their main purpose was to reinforce the defensive walls, which were very prone to sapping, escalade⁴⁷ and the use of battering rams,⁴⁸ once attackers managed to reach their bases.⁴⁹ A sloped embankment also increased the effective distance between approaching enemies and the defenders of the city wall.⁵⁰

The appearance of well fortified centres and defence systems during the EBA rather bears testimony of one of the darker aspects of early urbanism: The advent of large-scale conflicts between increasingly complex organized polities. City states and alliances of city states were able to raise considerable numbers of troops, which meant that the destructive potential of hostilities and the harm armed conflicts could bring upon individual communities increased. Textual evidence from the 24th century BCE clearly demonstrates the role of military confrontations⁵¹ in the recurring context of strained relations between the cities of Ebla, Mari and Armiu. The sources also highlight the practice of capturing and destroying cities.⁵² It is probably apt to assume that armed conflicts between the emerging urbanized polities

³⁹ Period IC destruction layers with human remains have been identified in excavation areas A, B and TMS. The individual operations are not linked stratigraphically, but located close to each other in the south-east of the upper town and it seems unlikely that they attest to different catastrophic events. Excavation area W-2 also yielded evidence for conflagrations during or at the end of period IC but neither weapons nor human remains. It is possible that the findings from area W-2 are related to destruction layers in areas A, B and TMS, but in a densely populated pre-modern settlement accidentally caused fires must also need to be taken into consideration.

⁴⁰ For a brief summary of the findings and the palaeopathological observation of the skeletal material see Wahl 2010.

⁴¹ Hempelmann 2013, 267.

⁴² Peltenburg 2010, 14.

⁴³ A synopsis of the various functions of Bronze Age city walls is provided by Ristvet (2007).

⁴⁴ Burke 2008.

⁴⁵ Rey 2012.

⁴⁶ The late EBA fortification of Tell Halawa A at the Middle Euphrates offers a good example for the construction of a sloped supplementary rampart in front of a city wall (Meyer 1989, Abb. 5).

⁴⁷ Scaling the defensive wall with ladders.

⁴⁸ The use of battering rams in EBA siege warfare is attested in the Ebla texts (Steinkeller 1987). For glyptic evidence from Tell Beydar that possibly depicts battering rams and siege towers see Nadali 2009.

⁴⁹ Keeley *et al.* 2007, 57.

⁵⁰ A secondary function of ramparts was to protect the curtain from erosion.

⁵¹ During the 3rd millennium depictions of war and violence appear in the art of Syro-Mesopotamia. An example is the so-called 'standard of Ebla' that depicts soldiers with prisoners of war and beheaded enemies (Akkermans & Schwartz 2003, 240–1, 268–9).

⁵² Archi & Biga 2003; Otto 2006, 21.

of Syro-Mesopotamia already posed an ever-present scenario in the centuries that preceded the 24th century and that the amount of labour and resources that were invested in the establishment of complex defensive systems can be understood first and foremost as an expression of an actual or perceived requirement for protection on the side of the early urban communities. Striking archaeological evidence for the impact of military actions during the later EBA has been provided by the archaeological exploration of the fortified structure of Banat-Bazi at the Middle Euphrates.⁵³ The ‘citadel of Bazi’ is a heavily fortified natural hill that belongs to an extended EBA settlement cluster (Banat-Bazi Complex), and obviously constituted an element of a larger defensive system. The citadel featured a sequence of three fortification walls and a chambered gate, the so-called Building 2, which was erected during period EBA IVA above a rock-cut defensive moat. The gate’s narrow passageway was flanked on each side by a trapezoidal and a triangular bastion.⁵⁴ The excavation of the complex could demonstrate that it was at least twice subjected to major attacks and destructions during the EBA. The second construction phase of Building 2 (Bazi level 9, EBA IVA) ‘(...) was thoroughly destroyed by a military event, as it was covered with thousands of sling bullets and numerous flint arrowheads.’⁵⁵ After the fortifications had been restored, the citadel was attacked a second time (Bazi level 8) and finally abandoned.⁵⁶



Fig. 7 The earliest and probably initial city wall excavated in area W-4 (construction phase 3, local period Tell Chuera IB?); direction of view: westward (photo by B. Rafiei-Alavi 2010; image is property of the Tell Chuera excavation team).

Retracing the building process: A sequential analysis of the defence works in area W

The earliest, probably initial⁵⁷ fortification of the lower town identified in area W consists of a mud brick-built defensive wall (Fig. 7). In front of the curtain wall a small pre-wall was discovered. We refer to this complex as construction phase 3.

STAGE 1: REFORTIFYING THE LOWER TOWN

During local period TCH ID a massive rampart (Fig. 4) was banked up against the old phase 3 city wall. Its substructure and bottom part were constructed from more or less horizontal layers of gravel, mud brick and

⁵³ Otto 2006.

⁵⁴ Otto 2006, fig. 7.

⁵⁵ Otto 2006, 11.

⁵⁶ Otto and Biga (Otto 2006; Otto & Biga 2010) have proposed to identify Banat-Bazi with Armanum, a well fortified site that the Akkadian ruler Naram-Sin besieged and captured according to the boastful accounts of his military incursions to the North. Armanum is generally identified with the place Armi/Armium, which is frequently mentioned in the Ebla texts. According to a historical reconstruction by Otto the final destruction of the citadel of Bazi might have been caused by Naram-Sin’s army, whereas the first destruction layer may have resulted from a conflict between the city states of Armi/Armium and Mari (Otto 2006, Table 1).

⁵⁷ During the last field season at Chuera we were not able to cut the trench all the way down to the natural soil. Yet virgin soil was reached in a sondage in the nearby lower town operation of W-3 on a level which lies just below the bottom of the trench in W-4. This observation implies that we actually identified the initial fortification of the lower town which was also excavated in area Z.

loam, but it also contains ashy deposits, indicating that garbage was used for construction.

STAGE 2: COMPLETING THE RAMPART

After the creation of the rampart's substructure the work crews truncated the old city wall and subsequently re-used the mud bricks and brick fragments to construct the upper part of the embankment (Fig. 8). A large pit dug into the structure of the old phase 3 city wall from above implies that brick material for the construction of the rampart might have also been excavated. Gravel-filled compartments as observed in the internal structure of the rampart in area Z (see above) were not recorded in area W-4. To some extent the rampart was banked against the half demolished old city wall, but – and this is remarkable – it is also leaning against the rear wall of a large building (Haus 5) which was erected on the stub of the older city wall.⁵⁸ Our analysis of the stratigraphic sequence revealed that this building must have been constructed at approximately the same time as the rampart. From this observation it can be derived that the refortification of the lower city in area W-4 was accompanied by a reorganization of the adjacent housing zone. Finally, the brick-built core of the embankment was covered with a glacis of rammed earth. The upper part of the well preserved escarpment slopes down gently until it reaches a small revetment wall. In contrast, the lower part of the rampart is steep (Fig. 4).

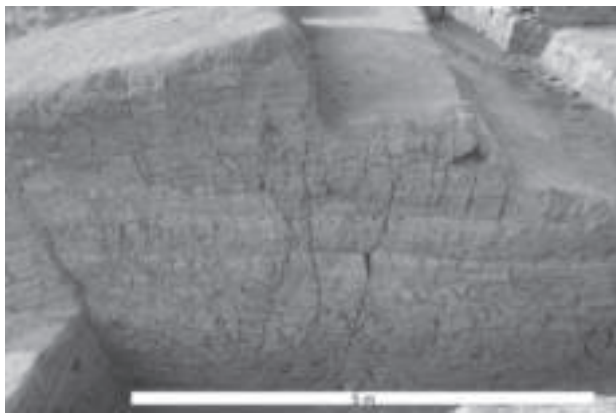


Fig. 8 Part of the north section through the rampart. The upper part of the rampart is constructed from re-used mudbricks; direction of view: northward (photo by A. Tamm 2009; image is property of the Tell Chuera excavation team).

STAGE 3: RAISING THE CURTAIN WALL – TECHNOLOGICAL DECISIONS AND A BASTION IN THE BACKYARD

Following the construction of the rampart (stages 1–2), a new city wall was built on top of it. We refer to the combination of city wall and rampart as construction phase 2. Both defensive elements constitute an architectural and functional unit. The excavated segments of the curtain wall are 3.5–5 m wide.⁵⁹ The wall is made up of straight segments, which are interconnected in the already described offset manner. The resulting ‘saw tooth’-shaped line of defence does not only represent a comparably straightforward way to fortify a circular city, it also contributed to the defence: like bastions, projecting segments of the city wall made it easier to monitor the space in front of the defence line (avoidance of dead sectors) and could function as a means to break frontal attacks.⁶⁰ At Chuera the ‘saw tooth’ wall was combined with unevenly spaced, solid bastions of a rectangular layout, which rest upon the upper, gently sloping part of the glacis. Behind the wall the geomagnetic prospection revealed the existence of a roughly circular road which was also exposed in several excavation areas.⁶¹ The ring-road, which was paved with pebbles during period TCH ID and facilitated direct access to various parts of the settlement, did not only form an important infrastructural component of the EBA townscape. It also improved the defence capacity of the outer fortification: it appears obvious that the fortification walls of huge urban sites were simply too large to be completely and evenly manned in the case of a siege. Presumably the radio-concentric layout of the street system of Tell Chuera and other circular sites offered an advantage to the defenders. Screened by the curtain wall and thus invisible for a besieging force and safe from sling bolts and arrows, people and resources could be easily relocated from one defensive position to another within the city. The opportunity to outmanoeuvre the besiegers, for example in the case of a sortie, therefore formed a crucial element of the defensive strategies of Bronze Age cities.

What seems remarkable about the construction of the phase 2 city wall is that the ancient work crews employed a wider range of different construction techniques and building materials at the same time: this can be illustrated by a feature we observed a few metres to the north of

⁵⁸ A detailed description of Haus 5 will be provided by A. Tamm in Meyer *et al.* in preparation.

⁵⁹ In area W a row of houses occupied the space between the city wall and a circular road. The houses were situated directly at the inside of the fortification wall and thereby gave it some extra support.

⁶⁰ For the use of bastions see Keeley *et al.* 2007, especially 67–70.

⁶¹ Excavation areas W-3, W-5 and W-7. See Meyer *et al.* in preparation.

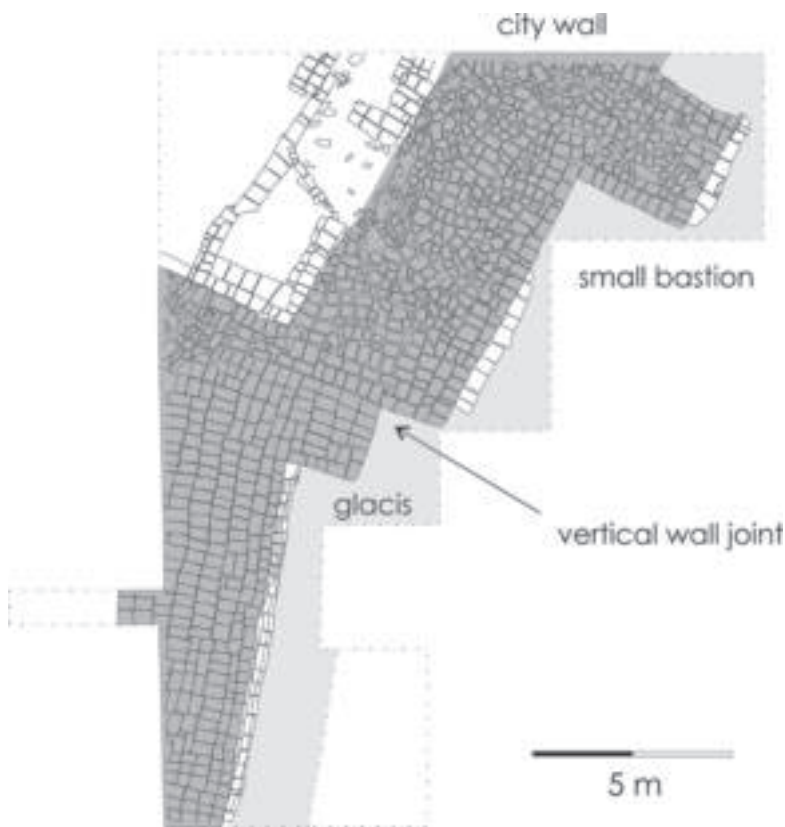


Fig. 9 Vertical joint between two differently constructed segments of the city wall (area W-4, construction phase 2, local period Tell Chuera ID; plan has been created by author in 2012; image is property of the Tell Chuera excavation team).

the large rectangular bastion (Bastion I). In this area, two adjoining segments of the curtain wall are divided by a vertical wall-joint (Fig. 9). The segment to the north of the joint is constructed from a mixture of orange and greyish mud bricks. Here, only the face of the wall consists of orderly laid bricks, whereas the core features irregular brickwork. A small bastion (Bastion II), integrated in this section, was also built according to this casemate way of construction. In sharp contrast, the southern wall segment displays regular brickwork, which bonds with that of a rectangular bastion. The construction also differs in terms of the building material, as the work crews made use of a brownish variety of bricks. It is evident that the two segments reflect different technological decisions by the work crews. These variations can be explained by different degrees of technological expertise or by an ad hoc use of the building materials that were available at a certain point in time. In the discussion section of

this article (see below) we will argue that the observed differences might also allow us to draw conclusions on the social organization of the process of fortification. Further insight on the organization of the construction process can be inferred from the aforementioned building (Haus 5) excavated on the inside of the city wall. This structure shares the characteristics of a contemporary domestic house,⁶² but with a reconstructed size of about 300 m², it stands out as one of the largest domestic units excavated at Chuera so far (Fig. 10).⁶³ The structural relationship between this building and the adjacent city wall appears evident. It was not only constructed at the same time as the phase 2 fortification, but also gave access to a small room which is embedded in the rear side of the large bastion (Bastion I). Through this room – which does not cut through the brickwork of the fortification but represents an element of the original layout – one could have probably entered the bastion's defensive platform

⁶² The floorplan consists of several rooms which are organized around a pebbled courtyard. The yard is accessible through an entrance corridor. This layout resembles the structure of many domestic houses which have been excavated in Chuera's upper and lower town. Installations and tools discovered in the yard of Haus 5 suggest that its inhabitants were engaged in pottery production.

⁶³ During period ID considerable differences in size are observable between domestic houses. Haus 5 is for example four times bigger than houses that were uncovered in the adjacent excavation area W-1. We interpret this remarkable difference in size as a possible indication for socio-economic differences between individual households.

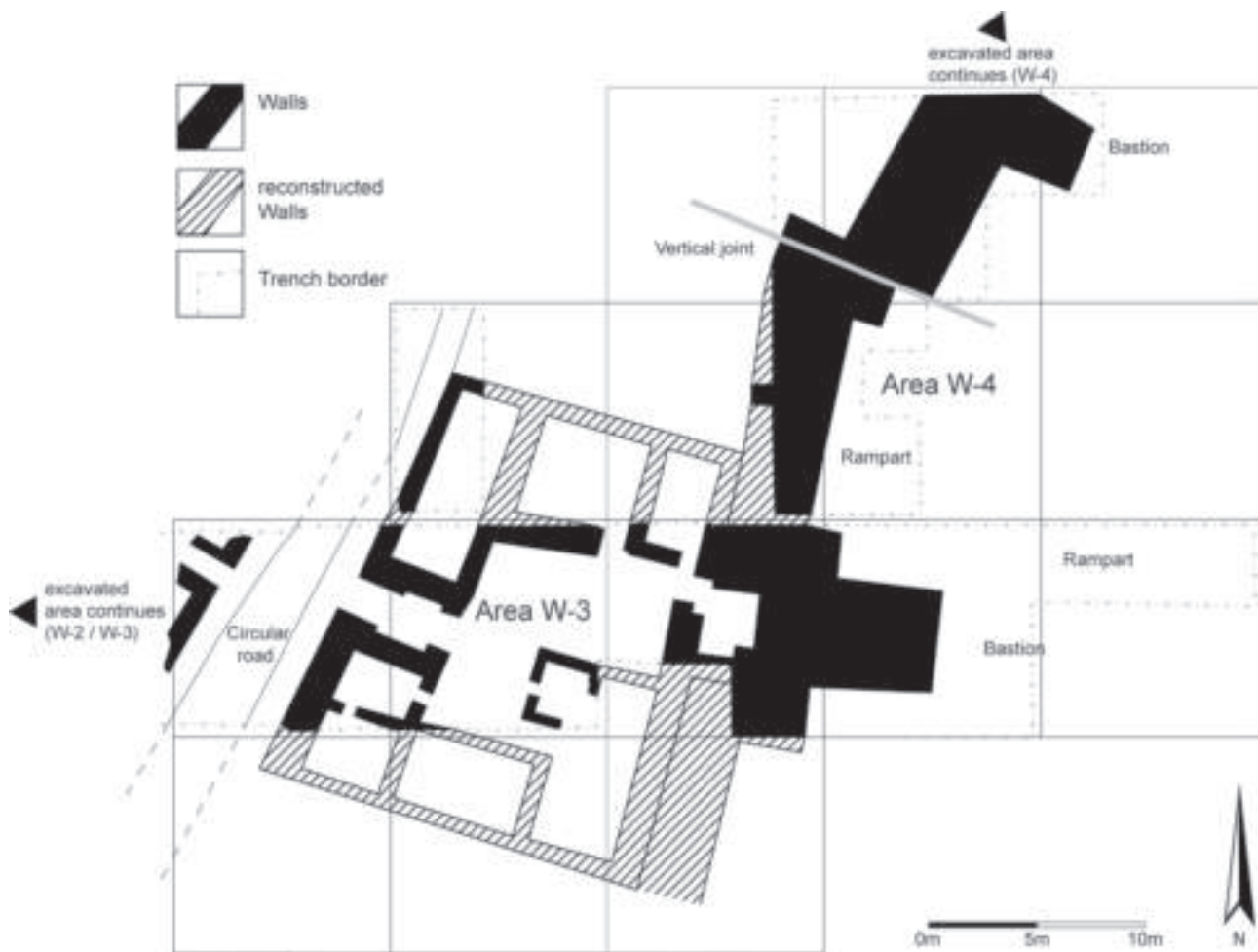


Fig. 10 Haus 5, the large building behind the wall (area W-3; plan has been created by author and A. Tamm in 2012; image is property of the Tell Chuera excavation team).

via a ladder. The erection of Haus 5, the construction of a bastion in its backyard and the maintenance of the latter therefore seem to be closely related.

STAGE 4: RUBBISH ROUTINES VERSUS THE DEFENCE SYSTEM

Soon after the construction of the phase 2 rampart and city wall, the inhabitants of Chuera's lower town started to use the glacis as a dump site. Through the enormous accumulation of ashes,⁶⁴ which were simply dumped over the wall, the rampart gradually lost its steep character; in the long run most certainly to the disadvantage of its defence capacity. The practice of using the outer defence works as a convenient location for waste disposal offers

a good example of how the city walls were integrated into the daily routines of the EBA community, which apparently also included an 'out of sight, out of mind attitude' when it came to the question of discarding household waste.

STAGE 5: THE DEMISE OF THE OUTER DEFENCES

The excavations in area W-4 also yielded evidence for the demise of the city wall. The last construction phase we could identify with certainty (phase 1) gives the impression of a rather ephemeral refortification. Still during local period ID a modest mud brick wall was built in front of the crumbling façade of the large rectangular bastion. It rests directly on the sloped ashy deposits,

⁶⁴ The ash layer yielded the majority of pottery and small finds discovered in area W-4. The finds match the assemblages that were retrieved from the nearby domestic areas.

consists only of a single row of bricks and runs parallel to the outer face of the bastion (Fig. 5). The space between the eroding bastion and the small wall was filled with fragmented bricks. The aim of this repair was to retain the eroding bastion and to create some kind of pre-wall.⁶⁵ Not very long after this reinforcement Chuera's lower town was deserted.⁶⁶ During the subsequent period IE (EBA IVB) the settlement was restricted to certain areas of the upper town, until the site was completely abandoned towards the end of the 3rd millennium BCE, a time when many early urban communities across Syro-Mesopotamia disintegrated.⁶⁷ In the case of Tell Chuera the crumbling walls of the lower town foreshadowed urban demise.

Discussion

In this paper we present preliminary results from the excavations along Chuera's outer defences, mainly focusing on the recent field data obtained from area W-4. By including examples from other excavation areas we also give a rough outline of the general development of the site's defensive system during the 3rd millennium BCE. The data illustrates the 'organic' character of the mud brick-built fortification and the complex building history of Chuera's defence works, which attests a diversity of technological decisions. As soon as the resource-intensive task of raising a city wall was finished, erosion began and the earthen walls were renovated in some sections, while others show occasional neglect as the ramparts were turned into dump sites (area W) or simply built-over (area H). Some sections evidence half-hearted repair attempts and gradual reinforcements⁶⁸ which resulted in a motley, yet not necessarily less efficient, conglomeration of defensive elements, which certainly fell under the umbrella of a general defence plan for the community. Due to a horizontal fieldwork approach, the juxtaposition of different constructional solutions became particularly apparent in excavation area W-4, where it could also be demonstrated that the

construction of the city wall was executed in conjunction with the building of a new house (Haus 5), which gave access to a neuralgic point of the outer city wall in this area (Bastion I). Together, these observations suggest a) the presence of decentralized aspects during the process of fortification as far as the arrangement of certain defensive elements was concerned, and b) a likely relationship between (certain?) households and the construction and maintenance of the site's defensive infrastructure.

An interesting comparison for the two adjoining but differently constructed wall segments recorded in area W-4 has been observed at the nearby EBA site of Kharab Sayyar⁶⁹ (Fig. 1). At Kharab Sayyar an exposed section of the city wall is likewise characterized by 'two different parts, clearly separated from each other by a vertical joint'.⁷⁰ In this case the joint is perfectly aligned with the border between two allotments and a doorway, which allowed the closure of a small alley behind the city wall. The excavator has – from our point of view – convincingly argued that this observation might indicate the existence of two distinct neighbourhoods whose inhabitants were responsible for building their immediate sections of the city wall. Although the defensive structures from Kharab Sayyar have been dated to the beginning of the EBA (local period Tell Chuera IA) and therefore predate the recently excavated fortifications of Chuera's lower town, the example suggests a relationship between the intramural organization of the urban polity and the organization of the process of fortification. Organizing the construction of city walls along the lines of residential units (neighbourhoods, quarters)⁷¹ would have been a practicable way to pool labour and face the laborious task of walling up cities. Decentralized aspects of fortification might also explain the observable structural inconsistencies and the diversity of building techniques, which may reflect different degrees of technological expertise, raw material management and variations of community decision making processes on the side of those who raised the walls.

⁶⁵ It was also identified to the north and to the south of the bastion.

⁶⁶ Meyer *et al.* in preparation.

⁶⁷ For a general discussion of this phenomenon see Akkermans & Schwartz 2003, 282–7; Cooper 2006, 257–67.

⁶⁸ A wider range of renovation works were for example recorded in excavation area W-6 (Binder in Meyer *et al.* in preparation).

⁶⁹ Kharab Sayyar is a small and also circular site in the vicinity of Tell Chuera. During the 3rd millennium BCE Kharab Sayyar was most probably politically and economically dominated by the larger site of Tell Chuera.

⁷⁰ Hempelmann 2008, 155; see also Hempelmann 2013. The two wall sections of Kharab Sayyar's enclosure differed in terms of their thickness and brick material.

⁷¹ Meyer (2011b) and Hempelmann (2013) have recently proposed that the society of the western Jezireh was still organized along tribal lines during the 3rd millennium BCE. Kinship and attributed kinship relations could have played a significant role for socio-spatial makeup of Chuera's residential neighbourhoods. For the adjacent Middle Euphrates-region, a 'kin-based tribal-based structure' has also been assumed (Cooper 2006, 245).

A similar conclusion has been proposed by Cooper in regard to the mid- to late 3rd-millennium BCE defensive structure of the site of Selenkahiye in the Syrian Middle Euphrates region. According to Cooper the fortifications of Selenkahiye display considerable variation in planning and execution. The excavators of Selenkahiye have observed that the city wall was not consistently built. All along the wall one sees changes in the dimensions of the wall. There is no regular or predictable placement of buttresses and towers, and a great number of variations in the numbers of reconstructions and enlargements have been observed.⁷² From this Cooper infers that ‘individual quarters or blocks’ of the city may have partly controlled the construction of certain defensive features and contributed to the shaping out of the layout of the defence works. Following Cooper this phenomenon might be explained by the persistence of heterarchical forms of political control in some EBA cities in the Middle Euphrates region, a scenario that might also be considered for the situation in the western Jezirah.

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⁷² Cooper 2006, 86.

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THE FORTIFICATIONS OF LARISA (BURUNCUK) RECONSIDERED

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Abstract

The excavations carried out on the acropolis residence of Larisa on Hermos in 1902 and in 1932–4 by Swedish and German archaeologists brought monumental buildings to light including city walls dating back to the span of time between the Archaic and early Hellenistic periods. Recent fieldwork has concentrated on the previously less well-studied fort with its settlement terraces in Larisa East and the late Classical extension in Larisa West.

The fort in Larisa East can be considered as late Archaic when compared with the walls in Larisa West which are dated to that period. It is a hilltop edifice with modest wall thickness and no true towers. At least two different masonry types can be identified. A stone base on solid rock with polygonal blocks of Lesbian type resting on it represents one particular case and rectangular blocks carrying ‘placement holes’ on the upper surfaces witnessed late Classical (or Hellenistic) re-arrangements.

The north-eastern enclosure in Larisa West next to the Archaic acropolis displays changes that took place in late Classical times. It is part of the extensive walls that actually surrounded the whole urban area developing southwards. The late Classical defence works here share basic technical features such as straight-but-not-bevelled edges of blocks, drafted corners and placement holes, as well as surface treatment with a hammer and pointed chisel. The prevailing masonry type is rectangular with horizontal or quasi-horizontal layers.

The site known as Larisa on Hermos is located in western Asia Minor within the boundaries of ancient Aeolis. The excavations on the acropolis residence in 1902 and 1932–4, conducted by Swedish and German archaeologists, brought monumental buildings to light dating back to

the span of time between Archaic and early Hellenistic periods. City walls, palace buildings and temples were unearthed. Besides these, a quite detailed sketch of the late Archaic fort 1.5 km distant from the acropolis hill in the east was prepared in 1911.¹ The architectural remains

¹ After the completion of the last excavations at Larisa in 1934, a field survey with a focus on architecture started in 2010 with the permission and support of Turkish Ministry of Culture and Tourism. The study campaigns are conducted by Prof. Turgut Saner and attended by members and students of the architectural history programme at the ITU. Priority was given to the documentation of the fort settlement in the east, as well as to that of the palaces, the megaron and the late Classical city walls in the western city. Special emphasis is attributed to quarrying and masonry techniques on the site.

in Larisa have been discussed in detail in the first volume of the three major works on this site.²

The fortifications of Larisa can be divided into five major parts (Fig. 1): in Larisa West (that is on the site of the acropolis residence), the prehistoric and/or pre-Greek sectors on the acropolis,³ the late Archaic enclosure of the rulers' residence⁴ (Fig. 1a), the late Classical extension walls encircling a much wider urban area⁵ (Fig. 1b) and the long stretch of wall (the 'eastern wall'⁶), an outer defence that flanks the site of the old village of Buruncuk (Br on the plan) to the north and east (Fig. 1c). All these walls present different yet interrelated cases. The triangular fort in Larisa East represents a fifth topic with its own characteristics and problems. Each part can be subdivided according to its morphology and chronology, as well as technical aspects.

The pre-Greek parts have remained, so far, beyond the immediate scope of the present ongoing architectural survey. The outer defence wall has been examined and partially documented only recently (2013 campaign). The late Archaic enclosure of the acropolis residence was treated in detail in the first Larisa volume on the architecture of the site.⁷

Emphasis is given here only on two topics: the first is the previously less well studied fort with its settlement terraces in Larisa East which displays certain technical features in a comparative manner; the second is the late Classical extension in Larisa West. Here, recent documentation of the north-eastern section and observations at other spots of the circuit are presented. The description of each case is followed by remarks on construction and technical aspects including masonry type and surface treatment. The ideas presented here are of a preliminary nature.

Quarries

The principal building stone in Larisa is local andesite in bluish grey and reddish brown colours, seen at its best in Figure 9. A somewhat 'shiny' white limestone can also be seen inserted into the masonry of buildings including the defensive walls. Finally, a considerable group of architectural elements, for instance column capitals and frieze blocks, are made of volcanic tufa (or the so-called Phokaia stone) with fine holes in its natural structure.

Stone for various kinds of constructions was obtained from major and minor quarry areas on the site (marked with Qr on Figs 1, 3 and 8), with various parts of solid rock on the surface used for that purpose. These spots around and in the settlements were obviously considered as the most convenient for transportation. Very close to all fortified areas, there are numerous single standing rocks which bear traces of stone extraction. Architectural blocks with extraction traces can be observed both in masonry or scattered on the fields in the area. One of the major quarries of Larisa West is to be found on the south-eastern slope of the city facing the site of the abandoned old village of Buruncuk. Along the course of the late Classical walls surrounding the entire western city there are numerous extraction spots. On the site of Larisa East, larger or smaller clusters of natural rock were used as quarries for the construction of the fort. For the construction of dwellings on terrace I and II blocks were taken from minor quarries on the same level.

Two types of holes in terms of quarrying techniques can be identified on the horizontal or vertical surface of the rock. In several cases, one single rectangular hole about 20–30 cm long, 1–2 cm wide and about 3 cm deep is seen on the surface. In others, a row of smaller rectangular holes is set into the surface of the rock to enable splitting (Fig. 2). These wedge-holes are about 12–14 cm long, 1.5–2 cm wide and 3–5 cm deep. The rows of holes to be seen on the rock surface represent preparation for splitting. Both methods were obviously practiced together in the course of the construction of the Larisaeen fortifications.

² Boehlau & Schefold 1940. The other volumes are on painted architectural terracotta plates (II) and small finds (III).

³ Boehlau & Schefold 1940, 44.

⁴ Boehlau & Schefold 1940, 44–51.

⁵ Reportedly no trace of a 5th-century fortification is preserved, Boehlau & Schefold 1940, 51; and the completion of the 'New Palace' in 350 BC was followed by the construction of the wider fortifications, Boehlau & Schefold 1940, 40 and 42.

⁶ Boehlau & Schefold 1940, 55.

⁷ See note 4. A catalogue of these walls (and of others of monumental architecture) is currently being prepared within the framework of the ongoing Larisa project.

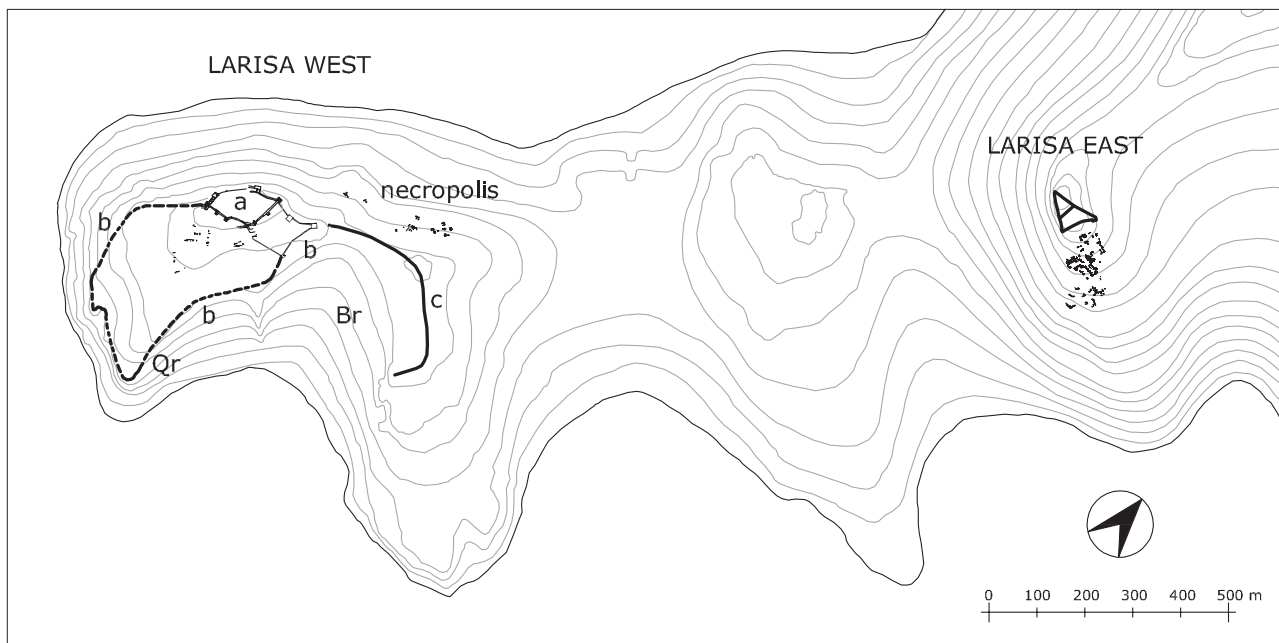


Fig. 1 Fortifications of Larisa (Larisa West: Late Archaic acropolis residence (a), inner fort to the east of it, late Classical extension towards south (b), outer defence (c). Larisa East: Fort settlement (© Archive of Larisa (Buruncuk) Project).



Fig. 2 Wedge holes on the horizontal surface of rock close to the north-eastern corner of the fort in Larisa East (© Archive of Larisa (Buruncuk) Project).

However, it is not easy to tell when these quarrying techniques were first practised here.⁸

The fort in Larisa East

A fort with sophisticated architecture lies about 1.5 km to the north-east of the acropolis residence and the greater settlement. Between these two, closer to the west is an extensive necropolis with the majority of its tombs of walled tumulus type. The fort settlement could not be closely examined and documented in previous studies in the 20th century since they had to be interrupted basically due to financial problems prior to the Second World War. Traces of an ancient settlement are mentioned in the first Larisa volume, yet except for the general documentation of the fort no work could be done on the terraces.⁹ The eastern wall of the fort and two settlement terraces have been well documented during the course of the recent architectural survey (Fig. 3). Compared to the extensive city area occupied by the Classical-late Classical western city of Larisa, the fort

⁸ Larger and smaller holes revealing the same extraction process have been identified on the quarry sites of Neandreaia as well; three granite quarries close to the city walls served among others for the construction of the defence system: Schulz 2000, 100–6, especially pls 29–30.

⁹ Boehlau & Schefold 1940, 113–16 and pl. 39. Four text pages dedicated to the fort also include the observations of Armin von Gerkan who drew the plan and the cross-section given on the plate.

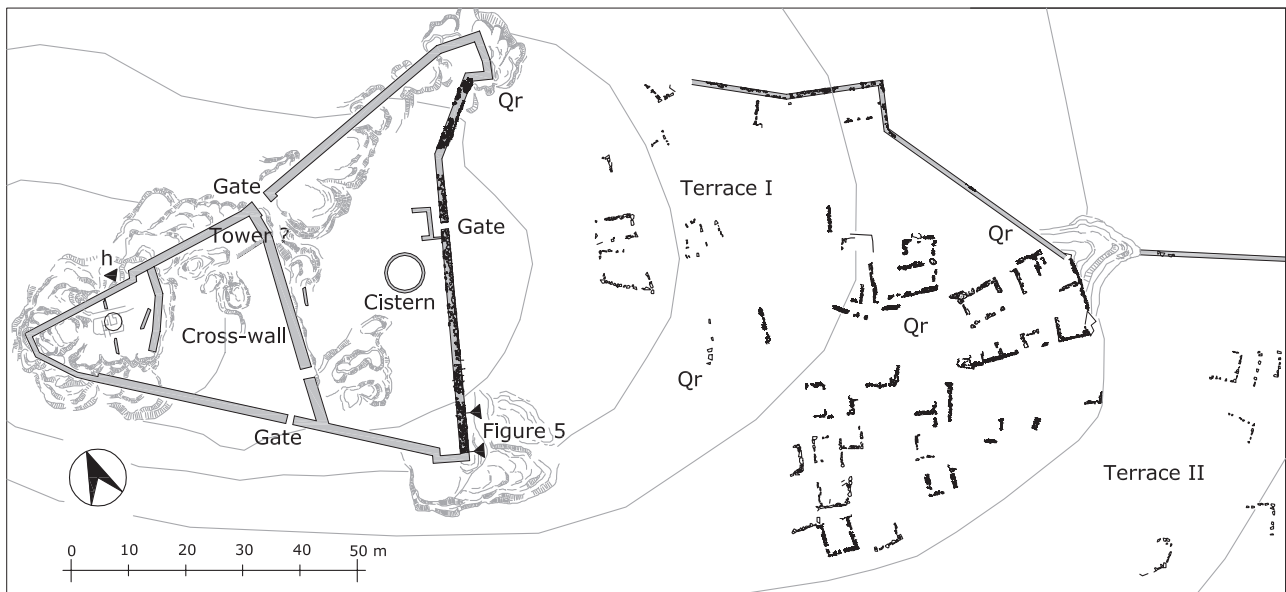


Fig. 3 Fort settlement in Larisa East (© Archive of Larisa (Buruncuk) Project).

settlement emerges only as an outer district of modest size. However, its overall dimensions are quite close to those of the late Archaic circuit in the west.¹⁰

The fort in Larisa East, resting on a 170–180 m high slope, has a triangular shape and overlooks a settlement covering two major terraces on its eastern slopes. Only the northern edge of the first settlement terrace (Terrace I) is formed of regular masonry. It is a 78 m long and 85 cm wide retaining wall with a right-angled projection about halfway along.¹¹ The other edges of the terrace are defined by natural rugged formations. Houses with one or two rooms create a small but dense settlement. The second settlement terrace (Terrace II) below is also framed by topographical conditions. The chain of rocks at its northern side is supported by means of roughly shaped larger blocks. This sector can be traced for about 25 m. The southern flank of both terraces is clearly defined by a steep rocky slope which is occasionally furnished with masonry.¹²

The southern wall of the fort runs in a straight line to a great extent, whereas the eastern and northern walls show salient points towards the inside. A cross-wall

inside the enclosure divides the triangular area into two. The one to the east features a circular cistern and traces of buildings. The western area ascends steeply and the topmost section of the fort has an additional enclosure with a rock-cut cistern inside. The two dividing walls inside the fort area and the major eastern wall all function as retaining walls. There is a tower-like building inside the northern wall, very close to the gate (marked with ‘Tower?’). It is located on the same line as the cross-wall (Fig. 4). A longer double-shelled wall – which has not been documented in previous investigations – runs in a straight line in the direction of the rocky skirt of the northern wall close to the hilltop. By these means a smaller triangular area remains outside the basic triangle with its western edge consisting of natural rock.

Three outer gates can be identified. One major gate is on the eastern wall and the other is on the northern course. A third opening is to be seen on the south wall in the upper part of the fort. Unlike the late Archaic fortifications of Larisa West, the fort in Larisa East is not strengthened with towers. Only the south-eastern and north-eastern corners, which stand on particular rock clusters, resemble towers with their slightly projecting flanks.

¹⁰ The definitions Larisa East and Larisa West are applied here since the fort settlement in the east and the excavated acropolis area are considered to have co-existed within the Larisaean territory. Armin von Gerkan is of the opinion that Larisa developed into a twin city whereas Schefold sees in it the natural acropolis of Larisa which is lacking in the western city: Boehlau & Schefold 1940, 116.

¹¹ The traces of minor walls right to the south of it might belong to a row of spaces attached to the projecting part of the northern wall.

¹² The thickness of the northern wall of the second terrace and the contour lines on the plan are given schematically. The dwellings on terrace II are more numerous than is shown on the plan here.



Fig. 4 Cross-wall (left) and late Archaic tower-like structure (middle, right) inside the fort (Larisa East) (© Archive of Larisa (Buruncuk) Project).



Fig. 5 Partial plan and elevation of the eastern wall of the fort (Larisa East) (© Archive of Larisa (Buruncuk) Project).

The eastern wall of the fort consists of a lower layer which is constructed of larger (and occasionally smaller) polygonal blocks placed directly on the rock bed. An upper layer with smaller blocks is placed on the former leaving a more or less 10 cm margin on the front (Fig. 5). The masonry of the upper layer is a mixture of Lesbian-type polygonal blocks and irregularly shaped

quadrangular blocks. The wall has an outer shell with larger blocks and an inner shell with smaller ones;¹³ its thickness ranges between 1.45 m (in the southern part) and 1.55 m (in the northern part).¹⁴ The southern wall, too, is made of polygonal and irregularly cut quadrangular blocks with curved edges. The stones are placed mostly so as to build conspicuous layers, a practice

¹³ A group of late Archaic walls is constructed in the same fashion, see Frederiksen 2011, 86.

¹⁴ Thus it matches with a very small group of late Archaic walls which are narrower than 2 m, Frederiksen 2011, 87, table 13 on 211.



Fig. 6 Southern wall of the fort (Larisa East) (© Archive of Larisa (Buruncuk) Project).

known as ‘coursed polygonal’.¹⁵ The vertical joints of the blocks which have the shape of flattened hexagons are elaborately arranged in an alternating manner so that the wall surface gains a honeycombed pattern (Fig. 6). Finally, the northern wall of the fort reveals the same constructional features as the other two main stretches; however, the type of masonry here displays a somewhat irregular character in terms of form and size of the blocks. Almost all formal types of blocks can be seen here side by side. Polygonal, quasi-rectangular and Lesbian-type blocks of larger and smaller dimensions are used in the masonry of the northern wall.

The lower layer of the eastern wall and the retaining walls on the upper levels of the slope, including the cross-wall, present ‘quarry face’ and ‘hammer face’ fronts. The final surface work of smoother treated stones at the fort is generally made by a pointed hammer or pointed chisel and flat chisel. The upper layers of the eastern wall, the entire course of the south wall and sectors of the north wall are constructed with blocks which display pointed

work on the front. Small holes caused by hammer blows are differently large and deep.

The existence of drafted margins is a further issue in the case of late Archaic masonry. Observations in Larisa East and West suggest that the Archaic wall constructions actually followed the same process as is known from Classical and Hellenistic times. However, the traces of margins along the edges and at the corners cannot be recognized at first sight since the final treatment has brought the surface patterns of the central part and of the margins very close to each other. In other words, at the last stage of the surface treatment drafted margins become almost invisible, since the application of pointed chisel/hammer work on the entire surface of the block has also diffused the edges.

As is known from numerous examples of Hellenistic masonry, the front side of a block that is to be smoothed would be surrounded by a flat margin first.¹⁶ This margin would guide the mason to the final smooth surface while

¹⁵ Scranton 1941, 52; Orlandos 1968, 134 ‘L’appareil polygonal en assises’.

¹⁶ Margins would be left after the surface treatment had been completed. They surely played a role during the construction process and sometimes had an additional decorative purpose as well: Saner 1998, 349; Saner 2000, 267–83 (both including many examples from Hellenistic western Asia Minor).



Fig. 7 Curtain wall to the north of tower I (Larisa West) (© Archive of Larisa (Buruncuk) Project).

removing the rough part at the centre. However, unlike Hellenistic examples, the central surface of the stone goes slightly beyond the margin in Archaic practice; numerous tiny holes which are formed by the blow of the mason's tool remain a little deeper than the level of the framing margin.

The Classical and especially Hellenistic practice of 'drafted corner'¹⁷ apparently does not exist at the Archaic constructions in Larisa East and West in its well-known form. Drafted margins can actually be recognized on closer observation at the corners of some late Archaic structures including tower I in the West and the tower-like building inside the fort in the East. The remaining blocks of the latter reveal this practice in a manifest form (Fig. 4). The long cross-wall directly joins this building. However, it has a totally different masonry consisting of larger blocks with a rusticated hammer face front. The surviving portion of the walls of the tower-like structure is of Lesbian type as is clearly seen at the curved edges. In addition to the pointed texture of the front surface, there are also larger hollowed zones that are carved deeper than the edges. Actually this must be common workmanship in the late Archaic period in Larisa. It is also seen in the southern and eastern walls of the fort, as well as in the late Archaic walls of the acropolis residence (Fig. 7).

The late Classical extension walls in Larisa West and the inner fort

The 100 m high area occupied by the acropolis residence was enlarged in the late Classical period¹⁸ at least tenfold towards the east and south (Fig. 8). An additionally fortified rampart (a bulwark, B on the plan) was attached in around 300 BC to the northern part of the residence circuit. Further, a *diateichisma* was constructed in the north-east, separating a citadel-like part from the rest of the urban area. Apart from the bulwark, legible portions of late Classical walls can be shown immediately to the west and south of the residence circuit. Otherwise the entire line of the walls enclosing the city towards south cannot be completely followed. One of the longer sections is to be found to the south of tower E.

The inner fort to the north-east with *diateichisma* covers an area of about 7,000 m². This area was defined as a 'Vorburg' in the first Larisa volume due to its relation to the acropolis.¹⁹ Its northern and eastern walls are at the same time part of the larger city walls. The northern wall of the fortification is about 83 m long. It is attached to tower VI of the late Archaic acropolis in the west and to a large corner tower (F) in the north-east. Traces of an inner rampart (G) with a slight projection outwards can be seen in the middle of the course. Its size – the outer edge is 12.10 m – is close to that of the north-eastern corner tower. The stretch to the east of the rampart slightly changes direction at a wide angle and terminates at the corner tower leaving a margin of one metre. Tower F is of almost square shape with outer dimensions of 12.56 m × 11.32/11.52 m. According to the topographical difference between the lowest and highest layers of surviving blocks its height must exceed 6 m.

The eastern wall of the inner fort (that is the north-eastern part of the entire city wall) is about 80 m long. This wall, too, shows at least two direction changes, the second one close to tower F being quite inconspicuous. The curtain walls here would supposedly meet at a wide angle as well, however, the mid part is completely missing at ground level. The south-eastern corner is marked by an almost square tower (E) which is considerably smaller than tower F. Its outer dimensions range between 7.36 m and 7.95 m. This tower marks the easternmost extreme of the *diateichisma* which runs in a straight line uphill

¹⁷ For this practice see Saner 2000.

¹⁸ See note 5.

¹⁹ Boehlau & Schefold 1940, 53.

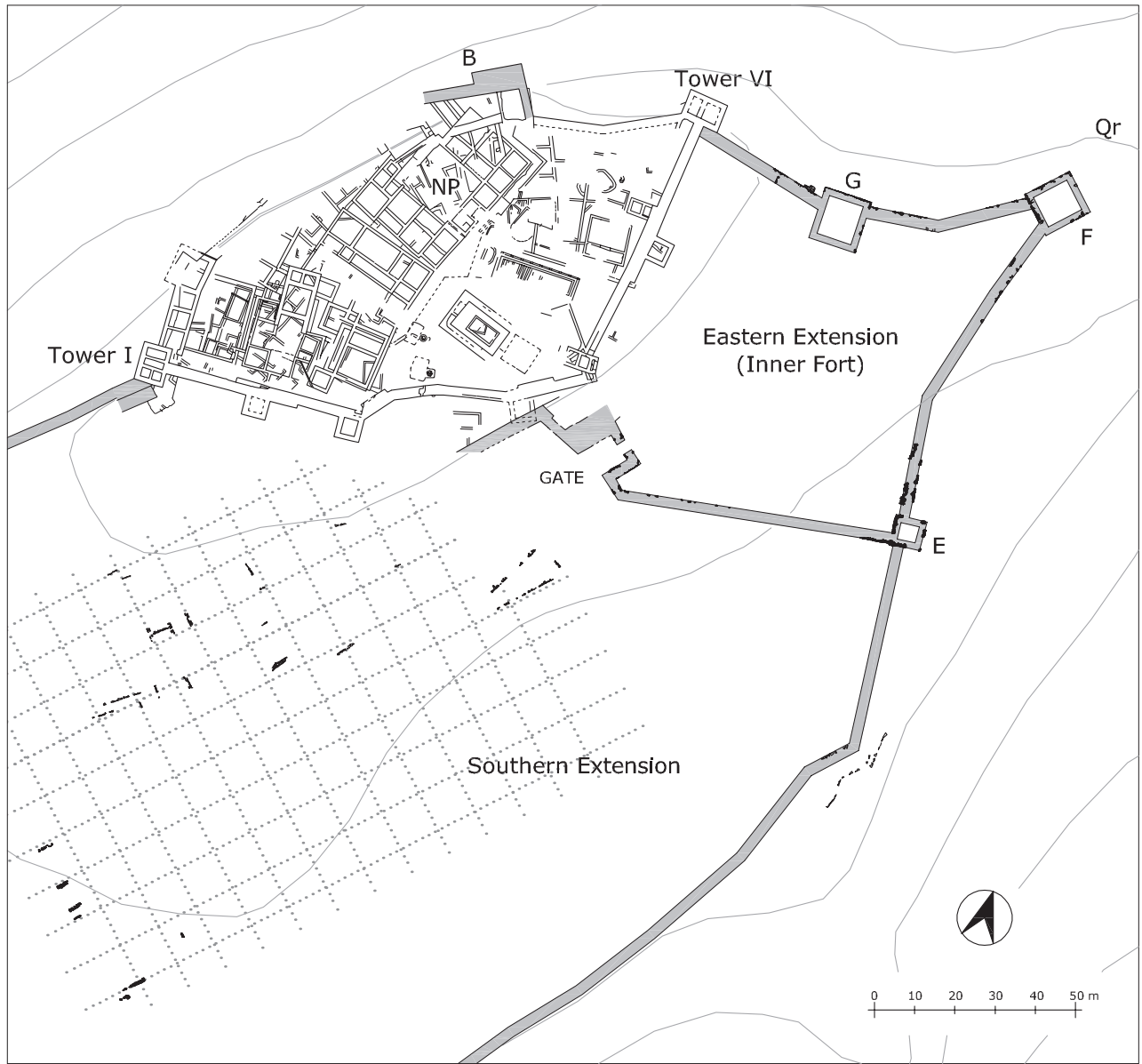


Fig. 8 Late Classical extensions towards east and south with part of regularly designed urban area (Larisa West) (© Archive of Larisa (Buruncuk) Project).

towards the west. The *diateichisma* and the eastern wall meet at tower E almost at a right-angle. At the western end of the *diateichisma* there is a gate connecting the

inner fort to the rest of the city.²⁰ The gate opening is placed inside a small court which is flanked by walls and not controlled by additional towers.

²⁰ It is not possible to identify the proper function of this *diateichisma* in Larisa considering the diverse functions mentioned by Sokolicek 2010, 235. Yet it should have served to separate the residence of an absolute ruler from the urban dwellings. Since the new (late Classical) palace was built inside the older acropolis residence, the adjacent area enclosed by the north-eastern fort would have served primarily a military purpose. The eastern sector of the late Archaic wall (the section between the gate area and tower VI) was abandoned and a new one was built slightly eastwards in late Classical period. This is why the ruler's residence (Burg) and the inner fort (Vorbürg) are considered separately: Boehlau & Schefold 1940, 54.

Quite a thick portion of a wall, its western extension and a section that runs towards south-west about 22 m long is all that is seen from the western side of the gate.²¹ The termination of the longer section west- south-westwards cannot be identified. The relation between this section and the much shorter sector attached to the late Archaic tower I presents one of the key questions towards understanding the late Classical arrangement in this part of the city.²²

A masonry technique with the use of rectangular blocks is a conspicuous feature of late Classical walls in Larisa. Two types of surface geometry can be clearly distinguished: one consisting of blocks with right-angles and thus with precisely laid horizontal courses and the other with almost rectangular – in fact slightly irregularly formed – blocks with inconsistently laid horizontal courses.²³ Later sections attached to the late Archaic circuit in the north, including the bulwark and the projecting part of the new palace are of the first type (Fig. 9), whereas the south-eastern part of the inner fort (Fig. 10) and the longer stretch next to the gate of the inner fort are of the latter.

Walls are all constructed in double shells. Even if there are alternately laid higher and lower courses in some sections, ‘pseudo isodomic’ laying is not a typical construction method in Larisa. Further, the courses with smaller blocks are not necessarily constructed of headers.

Two main types of surface treatment can be observed on the rectangular blocks. The so-called ‘quarry face’ and ‘hammer face’, both definitions for roughly hewn surfaces, prevail in many sections of the late Classical walls in Larisa West. The bossed central parts of the blocks project massively in some cases or just slightly at others. The concave traces of hammer treatment are still easily recognizable on the surfaces. Blocks do *not* display bevelled edges (of 1–2 cm) around, a practice for correct laying actually known from many Hellenistic walls.²⁴ Instead, they are cut following horizontal and vertical lines so that the rusticated fronts begin right at these sharply formed edges. At several blocks, hammer blows to create straight (but not bevelled) edges along the frame of the front can be easily identified.



Fig. 9 Archaic wall and projection of the 4th-century palace at the bulwark section – B on the plan – (Larisa West) (© Archive of Larisa (Buruncuk) Project).



Fig. 10 Wall of the *diateichisma* close to tower E facing south (Larisa West) (© Archive of Larisa (Buruncuk) Project).

At the northern rampart attached to the Archaic walls in Larisa West a group of blocks were smoothed by using a pointed chisel. There, hammer work and pointed chisel work can be seen together in the same masonry. The

²¹ These walls have already been unearthed and documented in previous studies. The northern and eastern walls along with towers, as well as the southern wall up to the gate were thoroughly measured during the 2012 Larisa campaign.

²² Another rampart at the western extension of the small portion of late Classical wall attached to tower I can be seen as related to that longer section, see Boehlau & Schefold 1940, 53.

²³ The late Classical walls in Neandrea dated to the earlier decades of the 4th century BC also reveal irregularly laid courses of quadrangular blocks with slanting joints: Schulz 2000, 113, pls 20.2, 25.4.

²⁴ Saner 1998, 347–8, fig. 1.



Fig. 11 Late Classical (or Hellenistic) wall on the northern sector of the fort in Larisa East (© Archive of Larisa (Buruncuk) Project).

surfaces that are treated with pointed chisel – thus displaying a slightly pointed texture – are smoother and somewhat rounder. This form is a characteristic feature of Hellenistic walls known as ‘pulvinated’ work. Besides, the masonry of the 4th-century palace²⁵ is also comparable to that of the city walls, especially at the bulwark sector in relation with the Archaic wall. There the layer with smoothed blocks carries a pointed surface texture and the rest of the façade consists of (occasionally pulvinated) blocks with hammer work. The same workmanship is seen at a small sector on the northern part of the fort in Larisa East (Fig. 3, h; Fig. 11).

Another technical device seen on the blocks of the late Classical walls in Larisa is related to the holes for placement on the upper surface of the blocks. They are about 3–4 cm long and serve for a precise placement of blocks after they have been lifted and only loosely placed next to another block first. To lay the stones correctly, long metal bars are used affixing them in these small holes and moving the block back and forth until the final position is achieved. Apart from many sectors in Larisa West the blocks of the uppermost part of the fort in Larisa East also carry placement holes on their upper surfaces.

Finally, drafted corners can be found at many spots of the later fortifications in Larisa East and West. The re-arrangement at the bulwark (B), the corners of the

towers G and F, as well as the corner of the section that runs south-westwards close to the gate of the inner fort are among many examples displaying drafted corners in Larisa West.

Conclusion

The fort in Larisa East (Figs 1 and 3) can be considered primarily as a late Archaic case due to comparison with the walls in Larisa West, which have already been dated to the late Archaic period with the help of excavations.²⁶ It is a hilltop edifice with modest wall thickness and no true towers. The advantage of the topography is skilfully utilized. Slopes with rocky edges are designed for defence and dwelling purposes and the natural rock bed provided a solid foundation for the construction of the walls. A consideration of the technical devices identifies at least two different masonry types at the fort in Larisa East. A stone base on solid rock with polygonal blocks of Lesbian type resting on it represents one particular case. Blocks show smoothed and vertical fronts with a pointed surface texture. This is related to the late Archaic works in Larisa West including the masonry type of the defence walls of the acropolis residence. In other words, both the formations of the eastern fort and the well-known circuit in Larisa West about 1.5 km away can be dated

²⁵ Boehlau & Schefold 1940, 93–106.

²⁶ See note 4.

to the same period. Therefore it can also be suggested that the upper walls of the fort were constructed of mud-brick as is assumed for the late Archaic walls on the acropolis.²⁷ The cross-wall inside the fort should be treated separately considering its relation to the small Archaic building with which it is integrated. Here the question is whether these two walls are of the same date or not. Similarly, the northern walls of the settlement terraces should be further examined to find out if they also function as a defence line. The surface texture with holes/dots reaching deeper than the edges and diffusing the frame emerges as a typical practice of the late Archaic period here.

The north-eastern enclosure of Larisa West (Fig. 8) shows changes (restorations) that took place in late Classical period. It is part of the extensive walls that actually surrounded the whole urban area developing southwards. The well-known late Archaic acropolis area was extended towards the east and south.²⁸ The enclosed area in the north-east next to the acropolis can be seen – at least formally – as a later counterpart of the late Archaic circuit. The form of the acropolis residence was obviously taken into account during the design process of the later addition. It has a major tower (F) like tower I to the west of the acropolis and its south-eastern part is designed with a right-angle exactly as is the south-western corner of the acropolis with tower I. Considering the older (late Archaic) and extended (late Classical) acropolis areas together the central placement of the inner gate gains significance since it was probably the major opening connecting the residence area to the ‘lower city’. The residential area with the 4th-century palace (‘New Palace’, NP on Fig. 8) and the inner fort together form a fortified sector twice as large as the late Archaic area. This enlarged sector had a division inside which replaced the eastern wall (south of Tower VI) of the late Archaic circuit.²⁹ The development of the urban fabric to the south, right outside the acropolis walls should be examined more closely even if the visible remains are not plentiful. Yet, there are indications that this district of the city was designed according to a grid system.³⁰

The late Classical defence works in Larisa reveal basic technical features such as straight-but-not-bevelled edges of blocks, drafted corners, placement holes, as well as surface treatment with a hammer and pointed chisel. The prevailing masonry type is rectangular with horizontal or quasi-horizontal layers. Occasionally practised pulvinated faces are to be found at certain sectors of the Hellenistic rampart in the north of Larisa West. This can be considered together with the highest part of the fort in Larisa East. ‘Placement holes’ on the upper surface of the blocks should be added as a further common feature of the late Classical walls in Larisa West and – again – the enclosure on the peak of the fort in Larisa East.

The Archaic conditions obviously provided an immediate base for the later developments in Larisa. Detailed documentation of ancient quarrying activities along with a constructional/technical survey and further studies on Larisaeen defence walls will surely add new information to knowledge of the lesser known urban character of this settlement.

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²⁷ See Boehlau & Schefold 1940, pl. 28 and Frederiksen 2011, 87.

²⁸ The spot where the late Classical city walls join the late Archaic enclosure can be observed at the south-west corner of tower I (see Fig. 8).

²⁹ See note 20.

³⁰ Regular planning in the Classical period was already considered, see Boehlau & Schefold 1940, 40, 107. The recent documentation of walls inside the older test trenches and of others seen above ground strongly suggests the application of a grid design. The dotted lines on Fig. 8, however, do not refer to *insulae* but just imply regularity. This is reminiscent of the urban character – among others – in Neandria (a comparable case with Larisa in many ways), where regular planning probably took place in the second half of the 4th century: Maischatz 1994, 64. On the other hand, the majority of the unearthed walls inside the trenches in Larisa, including a monumental one with terracotta frieze fragments (dated to 480/70) found in the same context are dated to the 5th century: Boehlau & Schefold 1940, 107.

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THE ACROPOLIS WALL ON MONTE CROCCIA (SOUTH ITALY). BUILDING A LUCANIAN FORTIFICATION: THE ECONOMICAL AND REPRESENTATIVE UTILIZATION OF THE LANDSCAPE

Ayşe Dalyancı-Berns & Agnes Henning

Abstract

During the 4th century BC complex fortification systems were newly built in a large number of hilltop-settlements in the mountainous interior of South Italy, in many cases consisting of two wall circuits. One of these settlements is located on the Monte Croccia, high above the Basento valley, half way between the Ionian and the Tyrrhenian coasts.

The aim of this paper is to show how the physical surroundings affected the construction of the inner circuit, the so-called acropolis wall of Monte Croccia. The implementation of the geomorphic conditions, mainly the massive rocks on the elongated mountain crest, indicates their use as building material. Furthermore, the rocks defined the course of the fortification wall, due to their integration into the wall curtains. Besides, the outcrops formed a natural backdrop for the monumental impression of the acropolis wall. In combination with the geomorphology of the site it becomes clear that the course of the wall is only partly effective for the defensive and offensive use of the fortification. In fact, the walls imply a high prestigious purpose. Hence it is possible to derive interpretations of the social organization of the site and furthermore of the Lucanian communities.

‘One who feels the fascination of Italian hill fortresses cannot fail to be deeply interested in this nameless city ...’¹ With these words Thomas Ashby and Robert Gardner appraised in 1920 the archaeological ruins of the ancient settlement on Monte Croccia in today’s province of Matera in the mountainous interior of South Italy (Fig. 1). Even at that time, the fortification walls of this settlement

aroused particular interest. Currently an archaeological research project of the Institute of Classical Archaeology of Ruprecht Karls-University Heidelberg under the responsibility of Agnes Henning is being carried out; its focus is on the fortified hilltop-settlements in the region between the Ionian and the Tyrrhenian coasts, namely ancient Lucania, where Monte Croccia is also located.

¹ Ashby & Gardner 1919, 214–15.

The aim of this project is to analyse and to comprehend the various dynamics in the settlement patterns of that region during the 4th and 3rd centuries BC. Cooperation between different disciplines and institutions together with the Soprintendenza dei Beni Archeologici della Basilicata is making an important contribution to our knowledge and to the preservation of this ancient site with its fortifications.

The fundamental changes in the settlement structures must be understood in the context of a period of transition in South Italy. Since the beginning of the so-called Greek colonization in South Italy at the end of the 8th century BC, the indigenous population of the mountainous interior was in mutual contact with the Greek cities along the Ionian and the Tyrrhenian coasts. Rome's expansion towards south in the 4th century BC engendered new social and cultural structures in the South Italian peninsula, which reflect the high self-confidence of the local populations. One peculiarity expressing this self-confidence was the monumental fortifications surrounding their settlements, which were first constructed during that time.

As part of this research project two survey campaigns (in 2011 and 2012) have been organized on Monte Croccia.² In September 2011 Ayşe Dalyancı-Berns and Ulrike Goldmann from the Technical University of Berlin conducted an architectural survey of the so-called acropolis wall.³ This article presents the preliminary results of this research with a focus on the peculiar utilization of the landscape in constructing this fortification.

Monte Croccia: history of research and of the ancient settlement

Monte Croccia is an elongated mountain ridge stretching from east to west, 1100 m above sea level. It is the highest summit inside a densely forested and water rich mountain massif, today's Parco Regionale Gallipoli Cognato on the south side of the Basento river. Together with the adjacent summit L'Airone, the landscape forms a pass inside the mountainous territory between the upper valley of the river Salandrella with the important ancient



Fig. 1 Map of South Italy with the hilltop-settlements mentioned in the text (Dalyancı-Berns & Henning).

² See in relation to the 2011 campaign Henning 2010–11 and Dalyancı-Berns & Henning 2012.

We sincerely thank the Fritz Thyssen Foundation Cologne, the Beuth University of Applied Sciences Berlin, the Institute of Classical Archaeology at Heidelberg University, the Alumni Society of Heidelberg University and the German Association of Surveying for their financial support which enabled this project. We would also like to express our gratitude to the Soprintendenza dei Beni Archeologici della Basilicata with its Soprintendente Antonio De Siena and his staff members. Furthermore we thank the Parco Regionale di Gallipoli Cognato, the Cooperativa Atlantide and the Corpo Forestale dello Stato, Comando Basilicata for their support and interest in our work. Special thanks go to the organizers of the conference for the opportunity to present our research in Athens and to publish it in this volume.

³ Unpublished Master's thesis in the study programme 'Historical building research and heritage conservation' at the Technical University of Berlin, Dalyancı-Berns & Goldmann 2012.

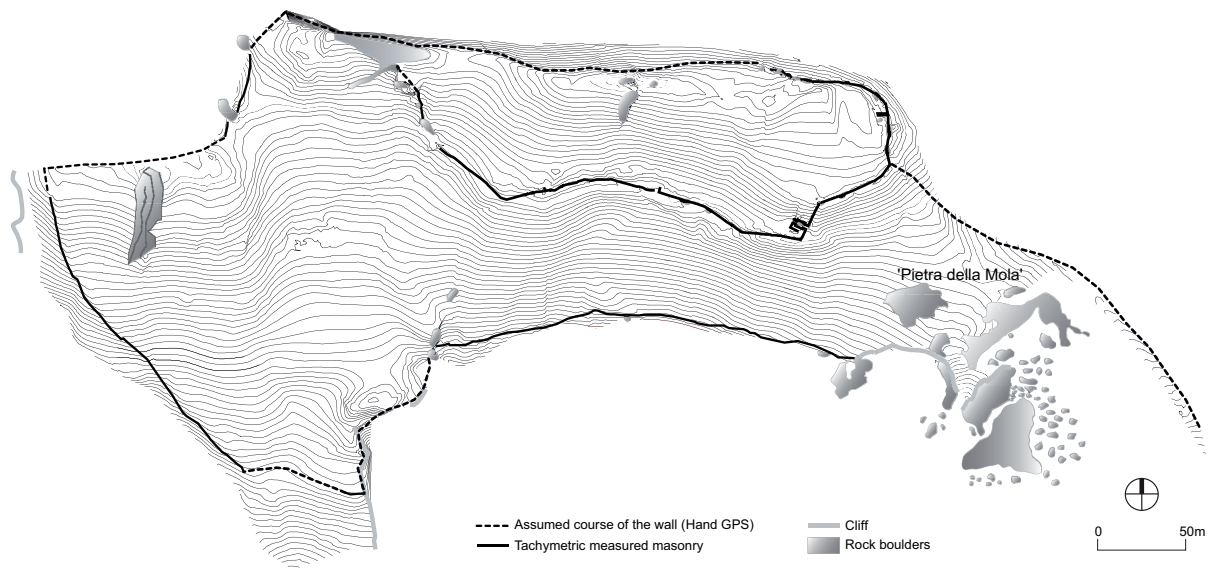


Fig. 2 Topographic map of Monte Croccia with its fortification circuits (Dalyancı-Berns & Henning).

settlement of Garaguso in the west and the plain of the Torrente Capperino underneath today's Pietrapertosa in the east. The ancient settlement of Monte Croccia played an important transit role within its immediate regional environment.

The mountain ridge slopes slightly in the west, south and east, whereas in the north a steep rocky edge borders the settlement area. One characteristic of the site is the rocky outcrops which rise in compact formations up to 10 m high or run down in the form of steep cliffs. The settlement area declines 60 m in altitude from north to south. Two wall-circuits, an outer one and an inner one, the so-called acropolis wall, enclose the settlement (Fig. 2).

The first official excavations on Monte Croccia were conducted by Michele Lacava at the end of the 19th century. He had already delineated the courses of the two fortifications at that time. His work on Monte Croccia resulted in only a few published pages without plans or figures.⁴

Only a few years later he was followed by Vittorio Di Cicco who carried out several excavations on Monte

Croccia at the very beginning of the 20th century. In a short report he summarized his results.⁵ Di Cicco mainly excavated longer traces of the fortification walls and the monumental gate of the acropolis wall. Besides this, he recorded several observations regarding the building techniques of the fortifications. During this time Thomas Ashby and Robert Gardner visited the site. That they must have been very impressed by the archaeological remains and the natural environment becomes clear in their brief report published shortly after their trip to Monte Croccia.⁶

After a long break, archaeological work on Monte Croccia started again during the winter of 1981/82, conducted by Attilio Tramonti on behalf of the Soprintendenza della Basilicata. His documentation is a fundamental basis for the reconstruction of the settlement history of the ancient site.⁷ He also excavated several traces of both fortification walls, mapped the course of the acropolis wall and carried out the first restoration work on the wall close to the acropolis gate. Further excavation and restoration on behalf of the Soprintendenza were carried out in 1991 by Maria Giuseppina Canosa and in 1998 by Alfonsina Russo.⁸

⁴ Lacava 1891, 138, 340–3.

⁵ Di Cicco 1919.

⁶ Ashby & Gardner 1919, 212.

⁷ Only a few pages are published on the excavations of Tramonti on Monte Croccia. This documentation is archived in the Museo Ridola in Matera. Cf. also Tramonti 1984.

⁸ Canosa's excavation report is also archived in the Museo Ridola in Matera. Russo's work is briefly documented in Nava 1999, 711–13.

The aim of the current project of Heidelberg University is to document the entire settlement area by modern methods. Within the scope of this work an intensive archaeological survey of the ground provides the basis of data. Additionally, the characteristic geomorphology of the site was surveyed by mapping all ancient structures visible above ground. One of the most important results is for the first time the visualization of the entire course of Monte Crocchia's complex fortification system within its natural environment on a modern map (Fig. 2). An architectural documentation of the acropolis wall completes the work and gives a comprehensive overview of the building techniques and the construction process of a Lucanian fortification wall of the 4th century BC.⁹

On the basis of all previous and current works it becomes clear that Monte Crocchia has been frequented since Mesolithic times.¹⁰ During the prehistoric periods in particular the rock formation called 'Pietra della Mola' in the east of the site attracted humans, documented by different finds.¹¹ However, it is unknown whether the site was frequented permanently or temporarily during that period.

Various evidence from the late 8th to the 5th century BC verifies an increase of human activity on Monte Crocchia. This is proven by sporadic tombs,¹² a large quantity of pottery sherds¹³ and some remains of architectural structures.¹⁴ The outline of the settlement during that period is very unclear. It is questionable if the outer wall already existed in the Archaic period.¹⁵ In the second half of the 4th century BC significant changes took place concerning the structure of the settlement:

older buildings were abandoned and built over by the new acropolis wall.¹⁶ After that stage, the highest part of the site was separated from the rest. The outer circuit must have existed by that time at the latest, so that the two walls would ensure the security of the settlement. Inside the settlement area larger structures were built of regular ashlar. Their suggested dating is the 4th century BC because of their similarity to the ashlar and the building techniques of the acropolis wall.¹⁷ Besides, an extra-urban sanctuary was established close to a source at the southern foot of the hill near the mountain pass. Since there are no significant finds later than the 3rd century BC it is presumed that the settlement was abandoned after that time.

The fortification on Monte Crocchia. The current situation and methods of the architectural survey

The ancient fortification system on Monte Crocchia mainly consists of two wall circuits, an outer and an inner one (Fig. 2). The outer circuit surrounds the settlement area and is distinctly traceable only in two longer segments in the south and the south-west, as it has been mostly destroyed and has become overgrown. The masonry consists of up to three courses, an outer and an inner shell with middle-sized irregular blocks, with a compact filling of small rubble stones and binder soil in between. The wall thickness measures up to 2.5 to 3 metres.¹⁸ On the basis of the masonry and the pottery found in the previous excavations the wall had been interpreted as

⁹ Although we know more than 80 fortified Lucanian sites of which several fortifications are preserved, only the walls of Moio della Civitella and Cività di Tricarico have been studied and partially published: Tréziny 1983; Cazanove 2008. Cf. the compilation of the fortified sites in De Gennaro 2005.

¹⁰ Tramonti 1984, 471.

¹¹ Cf. in detail Henning 2010–11, 91.

¹² Canosa found a tomb dated to the end of the 8th century BC on the acropolis ridge in the north, cf. her documentation archived in the Museo Ridola in Matera. Di Cicco excavated a tomb close to the acropolis wall in the north-east which he dated also to the 8th century BC, but the preserved pottery kept in the Museo Provinciale Potenza should be dated more generally into the Archaic period, perhaps the 6th century BC, cf. Di Cicco 1919, 253–4, fig. 9A. The better known 'tomba 1/tomba con elmo' was excavated by Tramonti and should be dated to the 5th century BC: Tramonti 1984, 470; Bottini 1993, 111–12; cf. also Colangelo *et al.* 2011, 38–40, 63–4, where the pottery finds belonging to the tomb are published separately and are dated differently.

¹³ Pottery sherds found during the survey in 2011 and 2012.

¹⁴ Tramonti 1984, 470.

¹⁵ The early construction of the outer circuit is suggested by Tramonti 1984, 470. Cf. also Henning 2010–11, 84–5.

¹⁶ Tramonti 1984, 470. The dating of the acropolis wall is not conclusively clarified, see below.

¹⁷ These structures are located in the south-west of the settlement inside the outer circuit and were already excavated and published in a plan by Di Cicco. However, he did not realize that the building was constructed in two different phases: Di Cicco 1919, 254–6, fig. 11. The original ashlar is visible in the north of the structure, the rest of the structure must have been built later of re-used material. The entire structure was surveyed and documented for the first time in July–August 2012. The dating is provisional and dependent on the construction date of the acropolis wall. The contemporaneity of the fortification and the building is currently only based on the similarity of their construction details. Only further excavations can provide the chronological evidence. See also below.

¹⁸ The wall strength of the outer circuit has recently been confirmed by geophysical prospection conducted in October 2012.

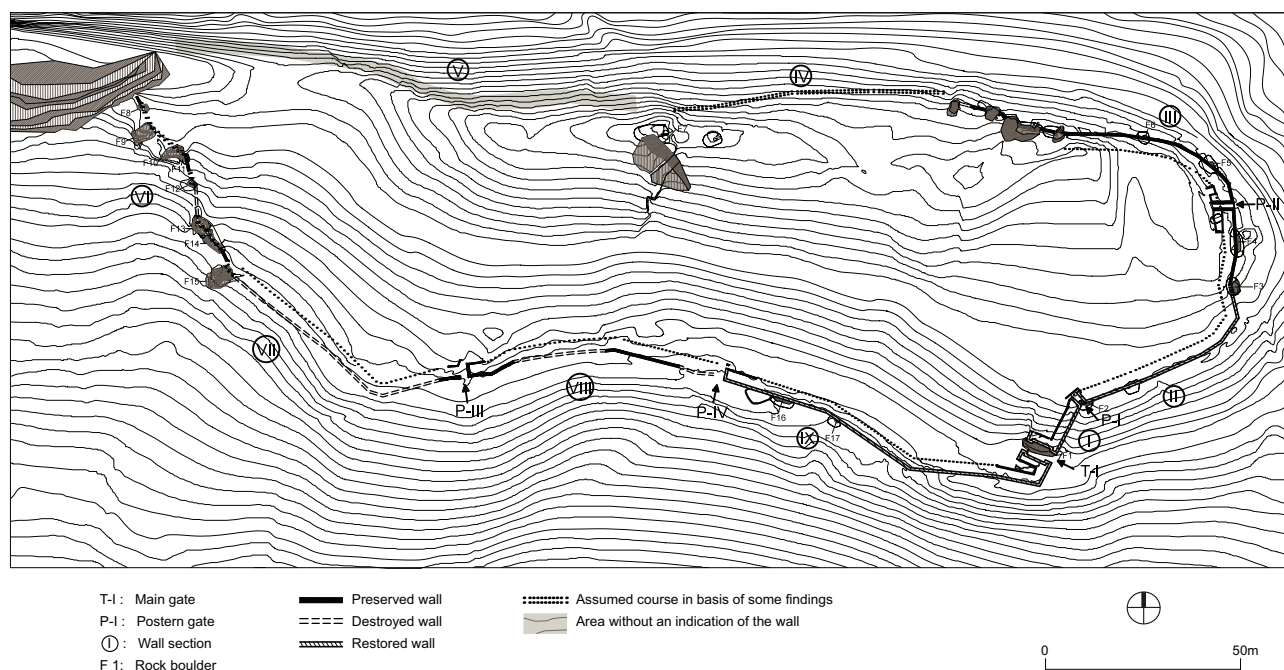


Fig. 3 Acropolis wall with its sections (Dalyancı-Berns & Henning).

being of Archaic date.¹⁹ However, since the masonry itself cannot be taken as a criterion for dating and as the exact context of the pottery is unknown, the dating of the outer circuit cannot be determined precisely.²⁰

In contrast to the outer circuit, the inner circuit or the so-called acropolis wall is considerably easier to trace, particularly as a result of previous research. Through the earlier restorations we have a picture of a uniformly well-preserved wall, which encloses the acropolis area, and gives us the opportunity to fully document the inner wall.

The first step of the architectural survey was to divide the entire wall into sections to simplify surveying and recording the wall systematically (Fig. 3). Tachymetric measuring followed afterwards. With the help of the measured and digitally assigned points it was possible to generate an updated site-map with the accurate course of the wall. Particularly significant situations were documented by hand drawings in the form of plans, elevations and sections. Photogrammetry was also used to support the drawings and in addition the wall was completely photographed.

The acropolis wall with its defensive and representative aspects

The acropolis wall incorporates the upper part of Monte Croccia's summit and follows the relief of the natural terrain. The enclosed area covers 340 m east-west and 97 m south-north. The northern part of the fortification runs on the highest hill combe while the southern section proceeds parallel to the hillside below (Fig. 3). It covers a steep slope in the west and the east. The acropolis wall has five points of access, a gate that is the main entrance to the acropolis area in the south-east, and four postern gates, of which two each are located to the west and the east of the chamber gate (Fig. 3).

The main-gate is positioned resourcefully in the south-east corner of the inner circuit (Fig. 3). This spot lies, though on a lower position within the acropolis wall, above the access route and overlooks the incoming and outgoing traffic from the mountain pass in the east. Besides, due to its position the main gate can be seen from a distance while approaching the acropolis area from the road. Thus positioning the gate here is impressive

¹⁹ Tramonti 1984, 470.

²⁰ In fact, until now we do not know any Lucanian hilltop-settlement with a surrounding stone fortification wall from the Archaic period. However, this could be a gap in the state of research.

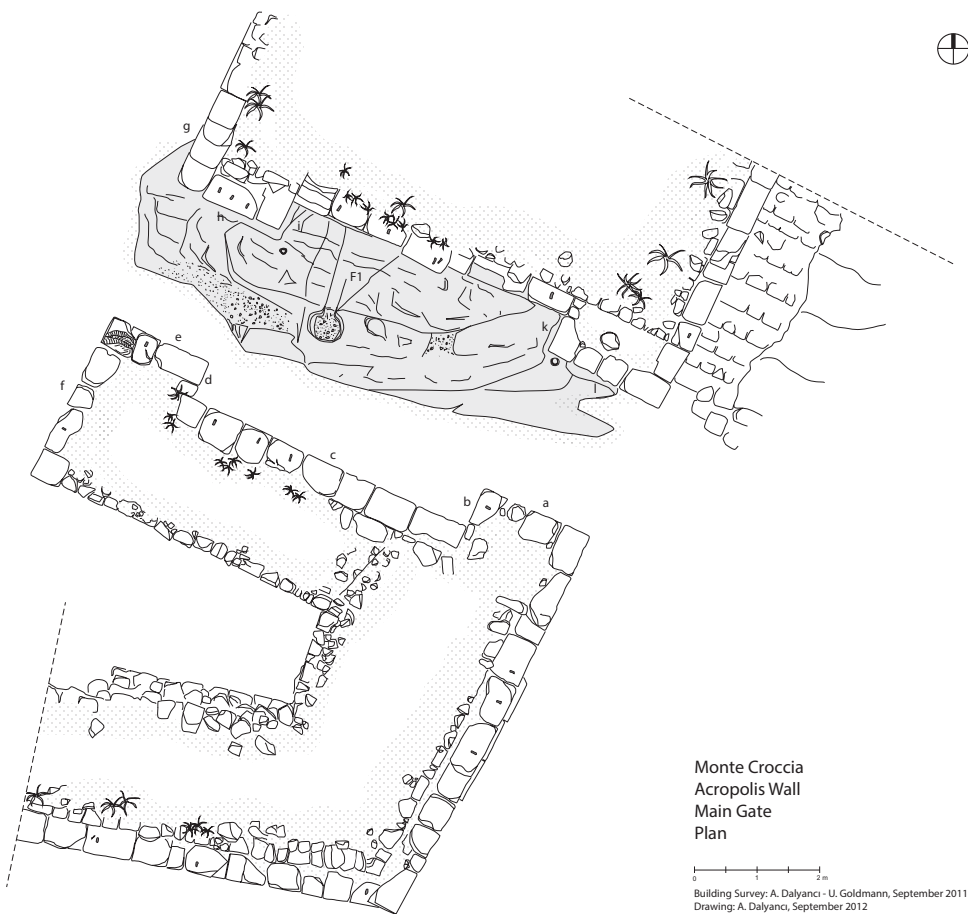


Fig. 4 Plan of the main gate (Dalyancı-Berns & Henning).

as much as it is strategic. The gate has a rectangular plan stretching inwards from the wall with an entrance in the west opening to a rectangular court or chamber, which in turn leads to a gateway opening in the east to the acropolis area (Fig. 4). We do not have any evidence how the gateway was barred. The passage in the chamber is narrowed by a rock, which has a processed surface, sloping upwards towards the acropolis area (Fig. 4). Presumably there was originally a distinct difference in level between the outside and the inside of the gate.²¹

The masonry of the gate is a fine isodomic ashlar, which appears to be of a considerably higher quality than the rest of the curtains and the postern gates. In addition to the ingeniously selected location, the elaborate implementation of the masonry is another attribute manifesting the intention for self-presentation.

Compared to the main gate, the postern gates are of a significantly simpler design. They are straight elongated

openings in the wall curtain and they function also as sally ports. The two postern gates located to the east of the main gate are well preserved or rather restored, while the other two are mostly destroyed. Like the main gate, the postern gates were strategically located and distributed along the fortification. Postern I is located on the top of the steep rising section I and provides a bastion function for the main gate in the north, so the flank security is assured (Fig. 3). The postern II is also located to the east, which was more exposed to danger like the southern sections where two more posterns were located (Fig. 3). However, no posterns are located on the long northern sections. A probable reason for this must be the cliff descending steeply in the north. The well-preserved gates are both relatively narrow and they both have a threshold block in the outer side, suggesting that they were most likely frequented only by pedestrians. As in the main gate the levels differ between the outside and the inside of the wall.

²¹ Cf. the gates in Moio della Civitella and Serra di Vaglio in which the original ascending surface is conserved.

The acropolis wall has been dated to the second half of the 4th century BC on the basis of the excavations and reconstructions conducted by Attilio Tramonti and Alfonsina Russo.²² It is, however, not clear whether this dating is based on stratified excavations or only general observations on finding material.²³ On the other hand the chronological classification of the Lucanian fortifications was influenced by the ancient literary sources referring to very hostile times during that period.²⁴ The few Lucanian fortifications presenting real excavation results date from the end of the 5th to the 3rd century BC.²⁵

Technique and material of the acropolis wall

The masonry used to build the fortification varies in different wall sections. The excavated and visible sections are constructed as a double-shell masonry without mortar and clamps. The outer shell is built of ashlar masonry in horizontal bedding in the southern and western sections (Fig. 5). The ashlar blocks are finely cut. The surfaces are processed with a point chisel and they look roughly burnished. In the north-eastern section the ashlar of the outer shell is replaced by rubble masonry (Fig. 6). The inner shell consists of smaller rubble stones and the filling is constructed of small stones and binder soil. The wall is approximately 3.25 m thick.

Along the acropolis wall there are no masonry seams. Therefore the wall must have been constructed in a single phase and the application of different masonry techniques does not reflect different building phases. Rather the varying types of the masonry could be explained with the different requirements for representative effect. So the masonry used in the secluded north-eastern section appears less impressive than that in the southern sections, which are visible from the settlement area as well as from the approaching roads.

The material used for the blocks is locally extracted yellowish sandstone. The stones were probably quarried from different local sources, for example from the rock formation 'Pietra della Mola' situated in the south-eastern corner of the settlement area. The cotter slots



Fig. 5 Ashlar masonry in section IX (Dalyancı-Berns & Henning).



Fig. 6 Rubble masonry in section III (Dalyancı-Berns & Henning).

found on the rocks in this area indicate that the rock group was used as a quarry. Another possible quarry is located on the west side of the mountain crest. Here there is a path-like indentation between two protruding rock surfaces, which seems artificially cut. In addition to these possible sources, the slabs cut out of boulders forming a natural part of the wall were also used as a source of supply. Several smaller sources distributed through the settlement indicate that the stones have been quarried from a source as close as possible to the construction site. This reduced the gruelling labour necessary for transporting the blocks through the difficult steep terrain.

²² Nava 1999, 713.

²³ What has been lacking so far is the creation of a chronological reference between the foundation of the acropolis wall, the exterior wall and the internal buildings. The current survey project is not able to date the fortification walls.

²⁴ For a review of the ancient sources regarding Lucania see Henning 2010, 3–4.

²⁵ Cf. the compilation of chronological evidence in De Gennaro 2005, 165 and the paragraph in Cazanove 2008, 8–14.

Another feature of the acropolis wall is the marking of blocks used in the masonry. Characters of the Greek alphabet are carved on the front faces of the ashlar blocks. After recording and analysing all of the marks distributed along the wall we can say that only certain Greek characters have been used and they were not applied in accordance with a specific system. They vary in their sizes and their location on the surface of the blocks. They also do not refer to the dimensions of the blocks. Some of the characters are upside down so they must have been applied before the placement of the blocks into the wall. The marks are concentrated especially in and around the main gate where the masonry is of a very high quality. The function of the marks cannot be determined conclusively but since they are not related to the construction process nor serve as masons' marks they must have functioned while the blocks were being quarried or processed: they could have been used for billing or as a signature of the stonecutter.

The utilization of the natural resources

The topographic and the geological features of Monte Crocchia were used in a creatively functional way in the construction of the acropolis wall. In the following the different methods of utilizing the natural resources will be classified and described.

The terrain topography was used efficiently while reconstructing the wall. This was achieved by inflecting

the course of the longer sections parallel to the slope and letting the shorter sections escalate following the steep hill (Fig. 3). So several direction changes were implemented along the longer sections and the segments have joined either with an acute or an obtuse angle. The blocks used for the resulting corners must have been accurately processed on the construction site individually as angled or mitred stones, alternating layer by layer. The level bounds in the steep ascending sections have to be counterbalanced with recessed stones, which were also produced directly on-site.

The steep sloping ground made towers redundant. The southward descending ridge of the mountain provided a panoramic view from the hill to the approaching roads. Furthermore, the inflecting line of the wall that follows the natural relief increased the number of vantage points to control the outside of the curtains. Therefore towers were not absolutely necessary for defence.

The sharply declining terrain edge was used as a part of the fortification. In the north-west the steep cliff precluded access to the acropolis area and thereby a possible attack from outside was inherently impossible. For this reason building a wall at this location was unnecessary. Here no masonry exists and the steep cliff functions as a fortification.

In addition to the topography, the geological structures of the mountain were also exploited. Frequently the bedrock served as a foundation for the wall (Fig. 7). In such cases the surfaces of flat lying rocks are roughly



Fig. 7 Bedrock as a foundation to the wall in section IX (Dalyancı-Berns & Henning).

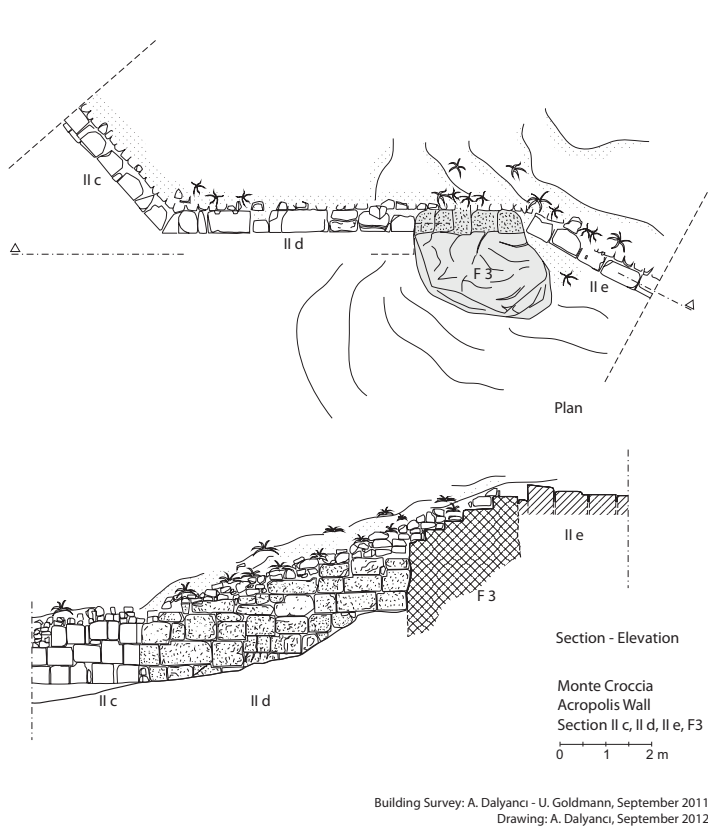


Fig. 8 Rock boulder integrated in the course of the wall in section II (Dalyanci-Berns & Henning).



Fig. 9 Impressive outcrops as a part of the wall in section VI (Dalyanci-Berns & Henning).

processed as a bearing bed and the blocks of the masonry sit directly on this bed without any other foundation stratum.

Another peculiar example where the natural resources have been used is the huge rock boulders, which are directly integrated in the course of the acropolis wall (Fig. 8). We can observe this for example in section II. Here a protruding outcrop (F 3) functions as a part of the wall and at the same time forms a bearing bed for the ashlar masonry. Five stair-like recesses have been cut out from the upper face of the rock where the ashlar blocks were placed in order to continue the wall northwards.

A further example of this can be seen in the west section of the acropolis wall. In this area a sequence of outcrops is impressively incorporated into the fortification (Fig. 9). The intervals between the rocks are filled with masonry and the rock surfaces were cut either stepped as in section II or chamfer-like to support the wall. Besides, the outer faces of the outcrops, that were up to 10 m high, were vertically cut in their overall height

to align these rocks with the wall. This can clearly be understood from a set of cotter slots left on one of the rocks (Fig. 10). Apparently, the rock boulder was being processed gradually to flatten the front face. A large amount of material had been cut out so the boulder now looks like a huge armchair. Five cotter slots lined up on



Fig. 10 Cotter slots on the rock boulder in section VI (Dalyanci-Berns & Henning).

the upper surface of the remaining body indicate that the cutting process had not been finished. If we try to visualize the scenery at this location, the fortification must have appeared very impressive from the south of the settlement area where the terrain ascends slightly to the north.

The acropolis wall: a strategic or a representative monument?

All in all, when we consider the whole conception of the acropolis wall we can easily conclude that it had different functions. The stable construction of the wall and the deliberately located postern gates imply that it was certainly constructed strategically so that it could resist an attack. However, there are considerable weak points: the natural steep descent and the outcrops in the north provided a solid wall but the western side of the fortification seems more difficult to defend because of the nature of the topography and the instability of the masonry. Assuming that the attackers could surmount the outer circuit, they would have an optimal attack zone on the acropolis wall. In fact, it would have been more logical to extend the south wall up to the western edge of the terrain where a segment of the outer chain runs. Instead the towering steep boulders provide a natural backdrop, which must have been very impressive. The wall had in either case a minimum height of 7 metres taking the course up the mountain. The builders intentionally used the outcrops for representative purposes as well as a source of supply. Therefore the entire fortification was built with a higher demand on symbolic purposes. Besides, the acropolis wall served also to divide the settlement area into two separate zones. A visitor from the outside had to pass through the gates of the two circuits to reach the acropolis. The inhabitants of the settlement itself were always aware of a second wall separating a large part of the area. The acropolis

wall was, as a result, a representative instrument both within the settlement for its residents and for outsiders and visitors.

The acropolis wall of Monte Crocchia and the Lucanian fortified hilltop-settlements

The settlement on Monte Crocchia with its complex fortification system is part of a general tendency in the 4th century BC in South Italy. It was not only the Greek colonies that followed the rapid development of fortification architecture,²⁶ but also the hilltop-settlements in the mountainous interior. It can be observed that the Lucanian hilltop-settlements developed special characteristics during that time.

One remarkable feature, which is detected not only on Monte Crocchia, is the separation of the settlement area and the additionally fortified acropolis, as seen at, for example, Monte Torretta,²⁷ Monte Coppolo²⁸ and Cività di Tricarico.²⁹ All these settlements show clearly that the highest part, the acropolis or *arx*, defines the most prominent part of the site.³⁰ A closer look at the Lucanian acropoleis suggests that these areas were allocated for special purposes: particularly prestigious buildings,³¹ sacred structures³² and exceptionally rich tombs were found at these areas.³³ For this reason, it is possible that the fortified acropoleis were reserved for the local elites and were spatially separated from the rest of the settlement.

The construction of a chamber or court gate for access is also a characteristic of the Lucanian fortifications. We know of these gates, for instance, also in Serra di Vaglio, on Monte Torretta, in Moio della Civitella and in Cività di Tricarico.³⁴ These gates were also constructed in the Greek colonies, as for example in Poseidonia/Paestum,³⁵ but their frequency of occurrence inland is remarkable.³⁶

²⁶ For example Poseidonia/Paestum, cf. Cipriani & Potrandolfo 2010; Elea/Velia, cf. Tocco Sciarelli 2009.

²⁷ Henning 2010–11, 93–6.

²⁸ Quilici & Quilici-Gigli 2002, 79–136.

²⁹ Cazanove 2008, 151–256.

³⁰ Furthermore, at some sites like, for example, Pomarico Vecchio and Serra di Vaglio the present topographic situation would suggest an undetected acropolis wall.

³¹ For example Cività di Tricarico: Cazanove 2008, 14–16.

³² For example Cività di Tricarico: Cazanove 2008, 14–16.

³³ For example Timmari: Canosa 2007.

³⁴ Cf. for a compilation of these gates in South Italy Cazanove 2008, 195–210.

³⁵ Cf. Cazanove 2008, 197–8, fig. 162,8–11; Cipriani & Potrandolfo 2010, 321–52.

³⁶ Apart from the chamber or court gates, other types were also used such as the example of the straight acropolis gates in Monte Toretta and Cività di Tricarico or the straight posterns on Monte Crocchia.

Even the building techniques at the different sites are very similar. Most of the Lucanian fortifications are constructed in ashlar masonry.³⁷ Exactly the same technique for quarrying the ashlar is to be found on Monte Torretta.³⁸ Also the construction methods on Monte Croccia resemble those on other sites, for instance the use of the double-shell masonry with a filling of rubble, sometimes strengthened by transverse walls between the inner and the outer shell, as observed on Monte Torretta and on Tempa Cortaglia. The workers found the same solutions to resolve problems of level bounds and of changes of directions in the course of the wall. Even the integration of rocky outcrops with a graded surface into the wall can occasionally be found, such as on Monte Torretta.

Marking the ashlar with Greek letters is not only a phenomenon on Monte Croccia, but features on several Lucanian fortifications constructed in regular masonry. The documentation of these marks shows that the repertoire of the letters is similar but not identical and the frequency of the single letters differs widely from site to site.³⁹

To summarize, it is apparent that the building methods for fortification walls in the mountainous interior of South Italy are very similar. Nevertheless, it becomes obvious that each settlement found individual solutions for their construction, depending on the particular topographic situation of each site. For instance, although the fortification on Monte Croccia has no towers because of the steeply sloping ground, they were necessary at other sites with a more level terrain, as for example on Monte Toretta and in Cività di Tricarico.

The natural resources have been utilized on no other Lucanian site so intensively and in such a variety of ways as on Monte Croccia. This relates not only to the terrain but also to the rocky outcrops which were used as building materials as well as a natural setting for the wall.

The fortifications on Monte Croccia and at all the other Lucanian sites cannot be explained solely as evidence of combative times. They are also important sources that give us an idea how the social structures of the Lucanian societies were organized during the 4th and the 3rd

centuries BC. They reflect a hierarchical separation of the community inside the settlements and probably indicate a competitive situation between several Lucanian settlements in building these fortifications. Obviously, in Lucania a uniform knowledge of building methods existed which was applied at each site individually.⁴⁰ However, the precise reconstruction of the building processes is only possible by surveying more fortification walls.

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³⁷ Cf. the compilation of the masonry in De Gennaro 2005, 164.

³⁸ We were able to observe traces of the cutter slots on some ashlar.

³⁹ This may be due to the fact that the walls are preserved only partially.

⁴⁰ Tréziny 1983; Tréziny 2008.

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Functions and Semantics

FUNCTIONS AND SEMANTICS OF FORTIFICATIONS: AN INTRODUCTION

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Abstract

Functions of ancient fortifications can be manifold. Certainly the original, in most cases the most important and often also the only purpose of a fortification is defence. In many cases, however, there are also urbanistic and symbolic functions to be considered, which sometimes even eclipsed the protective purpose. To find out about the different functions and to tell them apart, the strategy and defensive functioning of the whole monument and all its parts has to be analysed first and evaluated as to its adequacy, taking into account all the topographical, socio-political and economic contexts of its erection. After that the interplay with the urbanism of the protected settlement has to be studied, in order thereafter to differentiate phenomena of a defensive and urbanistic nature from others which might point to representative and other symbolic purposes – even if clear dividing lines cannot be drawn between some of the functions. A fortification can symbolize something by way of emphasizing aspects that are imminent in fortifications anyway, or by way of referring to other monuments or events or persons. By studying the particular socio-political context of the building, it is possible to find out who were the ‘senders’ and ‘receivers’ of the symbolic messages and what meaning and effect the latter were supposed to have. An evaluation of all functions of a fortification can only be achieved by a thorough and integrative contextual study of the monument, but will nevertheless always, to a certain degree, be hypothetical.

In our research network ‘Fokus Fortifikation’ we dedicated the third meeting, which took place in Ephesos in October 2009, to the subject of the different functions of fortifications. If we start to think about their possible functions, the provision of a defence against all sorts of enemies immediately springs to mind. I believe we can say that most civilizations in world history built

fortifications to protect themselves, and that therefore the defensive function of a fortification can be taken to be its original purpose, in most cases the most important and sometimes also the only one. However, when we look at some examples of exceptional monumentality, over-dimensioned traces, scenographic placement, amazing precision of craftsmanship or rich ornamentation,



Fig. 1 Main gate of the fortification of Aguntum (Lienz/Austria; photograph by the author).

it becomes very clear that there are some sort of representative¹ or identity aspects or others beyond the defensive one that must have inspired the builders of fortifications. In some cases, such functions apparently even eclipsed the protective purpose, and – very rarely – the latter was completely absent, as for example where wall rings were not closed, but only existed in parts at clearly visible locations, as is the case with the possibly Hadrianic fortification in Roman Aguntum near Lienz in Austria (Fig. 1),² or where the gates could not be closed, as at the ‘Arco d’Augusto’ in Ariminum/Rimini (Fig. 2), which was set into the wall in place of an older, lockable gate.³ All these kinds of functions can be subsumed under the term ‘symbolic functions’ or ‘semantic aspects’, because here the fortification, apart from its original practical purpose, is used as a symbol to communicate other messages to whichever beholder, and through them to other people. Until now, such functions have often only been pointed out in single case studies or works with strong regional or chronological limits and have not

received broader attention, although some sensitization has obviously taken place in the last few years.⁴

On another level, a fortification around a settlement automatically has urbanistic functions, even if these are mostly of secondary character. It constitutes the border between the inside and the outside and necessarily provides openings for paths and streets, enabling pedestrian and carriage traffic to enter or leave the settlement within; thus it automatically separates and at the same time links the different spheres of the urban and extra-urban space.⁵ Therefore it always interacts in some way with the settlement’s street system, urban structure and sometimes with its architecture, too.

Economic functions may also be linked to a fortification, if for instance a customs duty is connected to its crossing.⁶ They are closely connected to the defensive and protective purpose, as fortifications in this case function as a barrier that prevents the entry of certain people,

¹ For an important discussion of the term ‘representative’ and its relevant meaning in this context in the sense of a symbolic presentation of certain values see Ruppe 2010, 142–3.

² Swoboda 1935; Miltner 1953; Johnson 1983, 20. Also the fact that the towers of the main gate have doors towards the field side makes any defensive purpose quite questionable (Fig. 1), cf. also www.aguntum.info/17/index.asp (19.11.2012).

³ Pasini 1974, 2–3.

⁴ The subject is approached e.g. by Johnson 1983; Blagg 1983; Gros 1992; Miller 1995; Dey 2010; Laufer 2010; Radt 2010; Pinder 2011 and Frederiksen 2011; general thoughts about the representative function of fortifications were expressed e.g. by Ruppe 2010, 141–8, 157–63.

⁵ For this topic cf. e.g. Hölscher 1998, 69–73.

⁶ For the Greek *polis*, this however does not seem to have been common practice: Hansen 1997, 52. As for Roman times, see the example of Ephesos: Engelmann & Knibbe 1989. For other Roman examples cf. Stevens in this volume, pp. 288–99.



Fig. 2 'Arco d'Augusto' in the city wall of Ariminum (Rimini/Italy) as an unclosable gate (photograph by the author).

and to urbanistic aspects, as the wall thus constitutes the border between diverse areas of trade, i.e. different spheres connected to the settlement protected by it.

Furthermore, defensive buildings may have religious functions if they are part of or are connected to sanctuaries, include smaller cult places, cultic inscriptions or representations of gods, heroes or cultic symbols.⁷ In many cases, however, fortifications would only protect such cult places without holding religious functions themselves. Representations of cultic figures or signs would symbolize, for instance, the divine protection of the building and not indicate that the fortification itself

or its parts have a religious purpose. Therefore in such cases we must carefully analyse whether functions are genuinely religious or rather defensive or symbolic.

The three main areas of functions of a fortification may nevertheless be defined as protective and defensive, symbolic, and urbanistic. At the Ephesos meeting of our network, we accordingly created three work groups to look at these three aspects.⁸ It could be claimed that enough has been said about the military functions of fortifications: for a long time they have only been regarded from this point of view. Even here, however, the view has often been obstructed by the limited aims of studying the monuments, so it was worth considering all possible military and protective functions a fortification may have in its different contexts, and how to analyse them properly.

The most important question when considering the various purposes of fortifications is how to identify them and – even more difficult – how to tell them apart. It is convenient, but unfortunately also rare, that literary sources or inscriptions provide useful information in this respect, but even if this is the case, they have to be interpreted very critically, and most often they only speak about defensive functions after all.⁹ One might also find some clues about various functions in pictorial sources, i.e. statues, reliefs, wall or vase paintings, coins etc. These could either include representations of the monument in question, like statues of Tyche with the wall crown, city walls on Lycian city reliefs or Roman historical reliefs, or fortifications on vase paintings,¹⁰ or could be attached to the monument itself, like statues or reliefs ornamenting gates, towers etc.¹¹ In most cases, however, we are unfortunately deprived of such visual prompts and are left to analyse the monument itself and its context as it is, and this is what will be discussed now.

As, according to its original character, the foremost function of a fortification is protective and defensive, it is best to start with an evaluation of this aspect. This

⁷ For fortified sanctuaries in the eastern Mediterranean in the Hellenistic and Roman periods cf. Freyberger in this volume, pp. 244–62; for cultic activities at Mycenaean gates, see Hubert in this volume, pp. 66–81; for the representation of gods at the gates of the Classical city wall of Thasos, see Picard 1962; Holtzmann 1994; Geis 2007; Grandjean 2011, 514–16, 573–4; for apotropaic eyes on a block of the same city wall: Grandjean 2011, 128 with n. 12 and fig. 137.7 bis.

⁸ This article is based on the results of these three work groups; the results are presented in more detail in chapters 6–8 of Müth *et al.* 2016, written by B. Jansen (chapter 6: Defensive Funktionen), S. Müth, E. Laufer & C. Brasse (chapter 7: Symbolische Funktionen) and S. Müth (chapter 8: Urbanistic functions and aspects).

⁹ Cf. Ruppe 2010, 142–6; see also chapters 7 and 9 of Müth *et al.* 2016.

¹⁰ See chapter 9 of Müth *et al.* 2016.

¹¹ See chapter 7 (with the annexed table) of Müth *et al.* 2016.

means that all phenomena of a fortification should first be examined with this in mind, i.e. whether they indeed serve a defensive purpose, and if the measures taken were adequate to the particular potential threats at the time. Other practical reasons for layout, architecture or certain forms of details might be found on the urbanistic level, therefore it is necessary to analyse the interplay of the monument with the urbanism of the settlement it protects. In this way for instance the specific topography or architecture of gates or other openings might be accounted for. It may now sound too easy to say that everything that cannot be explained either as defensive or urbanistic must be symbolic.¹² I will return to the question of precisely what kind of symbolic functions we can expect in ancient fortifications, and how to detect and categorize them – in fact it is true, however, that we may only speak of symbolic aspects with certainty, if we can exclude that the phenomenon in question has to do with an adequate defence or other practical reasons.

I will continue first with a short overview of the study of defensive functions and then proceed to the analysis of urbanistic and symbolic functions according to the results of our three work groups. If we wish to evaluate the defensive functioning of a fortification, it is indispensable to be informed about the state of development of poliorcetics. The mutual influence of the progresses in the techniques of fortifications and poliorcetics is obvious, and enhancement in siege craft accounts for many details in fortification design: on a large scale concerning the general layout and strategy, as well as on its single buildings and details of form and construction.¹³ But this is not enough: we have to bear in mind that the development in fortification architecture is not at all linear. The individual socio-political and economic situation of the protected settlement and of the builders of the monument in question, as well as the topographical particularities of the site had a great influence on the individual buildings and thus have to be considered in detail. Furthermore, it is necessary to know against which sort of danger a defensive building was erected, and what know-how, financial, human and material resources were at the disposal of the builders, in order to decide about its efficiency and to understand why different dimensions and forms were chosen. A wall erected by a small community against pirates would for

example look very different from a fortification of a major city against large armies with siege machinery;¹⁴ both however would hold a clearly defensive purpose and could be highly efficient – each against its particular threat. If in these examples we considered only the monuments without their contexts, we would perhaps wrongly conclude that the weaker building did not have an important defensive function, which in fact it did. If a community with limited financial means had to protect itself against a large army with all means of attack at its disposal, it would simply not have been able to build a state-of-the art wall, but would have erected a more modest defence. Very few cities would have been able to afford a fortification like that of Hellenistic Rhodes for instance, built to considerable and unusual strength and according to the most advanced know-how of fortification technique and strategies.¹⁵ Without looking at the economic situation, one could misleadingly infer from a weaker building that it was either of an earlier date or not really meant to be militarily efficient, but built for other purposes instead.

In order to be able to gather all the context information and to evaluate the defensive functions of a fortification, it is of course necessary to study all sorts of sources and to apply various methods: a careful and thorough study of the monument itself, including all the methods of modern field research and the examination of written sources, doubtless constitutes the basis. The strategic concept of the whole arrangement should be analysed, alongside the purpose and function of every single part of it, like curtains, flanking buildings, gates, posterns, water outlets etc. with all their important details like loopholes, windows or other openings, battlements and so on. For the context information however, the surroundings and the protected settlement or region also have to be considered in the study, depending on how much is already known about them. It is of course not easy to define the adequacy of the defensive measures taken by certain people at a certain time, regarding the importance of the protected settlement or site, the state of development of fortification technique and strategy, and the degree and specific character of threat. The undertaking of such an assessment will always be subjective to some degree, but nevertheless it is necessary in order to get through to functions

¹² Quite similar to the ironic ‘rule’ we know from archaeology in general: that all phenomena we do not understand always have to be considered as cultic.

¹³ For the development of siege craft and its influence on fortifications cf. the fundamental works of Marsden 1969 and Garlan 1974.

¹⁴ Thus the walls of Pednelissos and Sillyon with exceptionally slender curtains rather have to be interpreted as conceived against pirates and other minor forces: Laufer 2010, 180–93.

¹⁵ Filimonos-Tsopotou 2004.



Fig. 3 South and south-east gates of Messene, not on street axes (plan by the author).

beyond the purely practical ones, which are not so easily recognizable.

Prior to that, however, the urbanistic aspects of the fortification have to be taken into account, and it is necessary to find out which phenomena relate to such concerns. For example the emplacement of gates might communicate with the street grid of a town: a gate can either be placed on the axis of a main street to facilitate traffic, as is the case for instance with the well-known Dipylon gate in Athens, the west gate of Priene,¹⁶ and many other examples in the Greek and Roman world, particularly in planned towns. On the contrary, a gate may deliberately *not* be aligned with a major street axis, in order to complicate the advance of enemies, who

penetrated the gate, into the city. This is the case with the south and south-eastern gates of Messene (Fig. 3), where, with regard to the terrain, it would have been easily possible to adjust them to the street system.¹⁷

A certain layout of the wall line might reflect the extent of the inhabited area or the subdivision of the town space in areas of living, of working, for cult or burial, agriculture or other aspects. *Diatechismata* for instance in most cases would have strategic explanations,¹⁸ but in some examples like the Greek-Phoenician colony Emporion in north-eastern Spain, a *diatechisma* could also separate different groups of the population or areas of dwelling (Strabo 3.4.8).¹⁹

Of course extensive knowledge of the urbanism of the settlement in question is indispensable for the assessment of urbanistic functions or aspects of a fortification.

Having defined the practical functionality of a fortification for defence and urbanism, we may regard all phenomena which go beyond or which even contradict those purposes as indications of symbolic functions. It is, however, important to note that a sharp line cannot be drawn between those functions, because there are large areas of overlap: deterring the enemy with a powerful defensive building meant at the same time impressing all contemplators with monumentality; a strategically optimal fortification line on a ridge or a range of hills



Fig. 4 North-western city wall of Messene on hills and ridges, seen from the west (photograph by Jürgen Giese).

¹⁶ Knigge 1988, 9 fig. 1, 68–73, 157–65; Ruppe 2007, 293–4.

¹⁷ Müth 2007, 286–7 with pl. 1; Müth 2010, 75–6 with fig. 1.

¹⁸ Sokolicek 2009.

¹⁹ Cf. also Livy 34.9.1–8: as Moret 1995 points out, the two (clearly defensive) walls mentioned by Livy, surrounding the Greek and the indigene settlements respectively, in all probability have to be seen as different from the one (obviously more peaceful) wall Strabo mentions, shared by the two peoples, and which also seems to be reflected in the first sentence of Livy 34.9.1, presumably going back to a source of early Augustan times.



Anti-clockwise from top left:

Fig. 5 Northern, hilly part of city wall of Heracleia on Latmos zig-zagging over steep rocks (photograph by the author).

Fig. 6 City wall of Aventicum (Avenches/Switzerland), stretch of wall north of the east gate with towers projecting to the inside (the reconstructed tower called 'Tournallaz' in the background), seen from the town side (photograph by the author).

Fig. 7 Polygonal-indented block cut at the north tower of the west gate of Eretria (photograph by the author).

Fig. 8 Multi-coloured masonry at the Late Archaic city wall of Larisa on Hermos (photograph by the author).

Fig. 9 Pattern of vertical grooves at the base of a round tower of the Lycurgian fortifications of Eleusis (photograph by the author).



was easily visible from afar and offered an imposing aspect, as for example the north-western city wall of Messene did (Fig. 4); masonry forms that were thought to be most stable often came alongside great regularity and precision of stone working, which in turn displayed an aesthetic and decorative effect; and a gate on the axis of a main street, apart from its practical function, offered a beneficial ensemble impression. So it is always a matter of careful judgement to decide whether such characteristics were ostentatiously brought out and thus bore a symbolic meaning or not.

Indications for symbolic functions can emerge on different levels: they can apply to the general strategic concept, dimension and trace of the fortification, as for instance the over-dimensioning of a wall circuit like the one of Heracleia on Latmos (Fig. 5),²⁰ where the wall line is not adapted to the closest natural line of defence around the settlement that would have been easy enough to hold and reasonable to choose, but instead goes far up into the high mountains and includes large rocky areas and high terrain. Not a century after its construction, this line obviously could not be manned any longer, so a *diateichisma* was built along a much more reasonable trace. Indicators for symbolic functions may also be found in the form and typology of a fortification's architectural elements, as is the case in Aventicum (Avenches/Switzerland), where all the towers only project to the inside (Fig. 6),²¹ or they may concern details of form or effectuation, such as masonry forms like the over elaborate polygonal-indented block cut at the towers of the early Classical west gate of Eretria (Fig. 7),²² or the choice of material as in the late Archaic wall of Larisa on Hermos, where a multi-coloured effect is produced (Fig. 8),²³ the finishing of blocks, for example the decorative pattern of vertical grooves at the base of a Lycurgian round tower in Eleusis (Fig. 9),²⁴ or the application of architectural ornaments, as at the richly decorated early Claudian façade of the 'Porta Borsari' in Verona (Fig. 10) and hundreds of other Roman gates.²⁵

Such phenomena first have to be examined on their own, in order to clarify their precise character and inherent meanings and messages: Which effects were they meant to produce? Which reactions did they evoke? In the next



Fig. 10 Façade of the 'Porta Borsari' in Verona (photograph by the author).

step the possibilities of interpretation in the light of the particular socio-political context have to be considered: Who were the 'senders', and who the 'receivers' of the message? What were the political, social or private motivations of the former towards the latter? How are meaning and effect to be understood in the precise historical context?

In most cases the senders certainly were the people who had the fortifications built. But were the potential receivers all contemplators, individuals like a sovereign, cities, leagues or foreign states? They might be found outside, but also inside the walls, in the form of the

²⁰ McNicoll 1997, 77; Krischen 1922.

²¹ Johnson 1983, 16.

²² Krause 1972, pls. 1, 2, 125–6; Fachard 2004, 99 with pl. 12.4.

²³ Frederiksen 2011, 72; Winter 1971, 78–9; Böhlau & Schefold 1940, 48 pl. 33. Cf. also Saner, Sağ & Denктаş in this volume, pp. 159–70.

²⁴ Winter 1971, 78–80; Adam 1982, 197 with photograph 236 and fig. 113.

²⁵ Johnson 1983, 13–15, 22–4.



Fig. 11 Northern Acropolis fortifications, comprising architectural members of the Pre-Parthenon and the old Athena temple visible from afar, seen from the area of the Roman agora (photograph by the author).

protected citizens themselves. A fortification built by the *demos* of a *polis* for instance may bear signals of wealth, power and independence towards the outside, towards the inside signals of togetherness and common identity, and to both sides it may symbolize a well structured order and evoke an ornamental effect by aesthetic design.

There are various ways of symbolizing with fortifications: first they may emphasize in a distinct way aspects that are inherent in fortifications anyway, which in the terminology of Christoph Baumberger's new symbol theory of architecture is called the '*Exemplifikation*' (exemplification) of such aspects.²⁶ A fortification always shows power and the readiness and ability to defend, a certain level of civilization, economic potential, social cohesion, demarcation and delimitation, some degree of autonomy or a certain legal status, and very often it automatically also has an ornamental effect on a cityscape. But only if one or several of these aspects are deliberately accentuated, we can catch the intention of a symbolic meaning.

Another way of symbolizing is a non-immanent one: fortifications may refer to other monuments by imitating them in architectural elements or details, to local events

or certain situations, called '*Denotation*', or in a more abstracted form '*Anspielung*' (allusion) in Baumberger's terminology.²⁷ For example by comprising spolia or inscriptions, fortifications can be turned into historical monuments, as it is very obviously the case with the northern Acropolis walls in Athens after the Persian Wars, where architectural members of the pre-Parthenon and the old Athena temple, which were destroyed by the Persians, were included at well visible spots (Fig. 11).²⁸ Fortifications may also denote other buildings by imitating them in concept, architectural elements or details, such as the Late Antique defences of Anazarbos, which copied the concept of the city wall of Constantinople.²⁹ Furthermore, they can adopt the role of private monuments by including tombs or inscriptions: an obviously ostentatious private aspect was given to the fortifications to the south of the stadium at Messene, where in Augustan or Tiberian times a temple-like funeral monument was built into the wall, which for this purpose had to be modified considerably.³⁰ In Perge, the conversion of the south gate into a pompous city gate richly equipped with architectural ornaments and sculptures in the 2nd century AD was commemorated by an inscription to be the work of the benefactress Plancia Magna, who thus turned the former military construction into a monument for private representation.³¹

²⁶ Baumberger 2010, 161–262.

²⁷ Baumberger 2010, 69–160, 379–452.

²⁸ Stähler 1993, 17–24; Bäbler 2001; Lindenlauf 2003; Di Cesare 2004.

²⁹ Posamentir 2008, 93–102 with figs. 2a–14a; Posamentir 2011, 215–23.

³⁰ Müth 2007, 119–24.

³¹ Lauter 1972.

Thus fortifications may adopt various semantic aspects, and one monument may have several at the same time, but it might often be difficult to tell them apart. Defensive buildings can also feature cultic functions, but if a fortification does not symbolize anything cultic and for instance only protects cultic structures, those have to be separated from symbolic functions. At Thasos, however, there is a clear symbolic meaning of the great reliefs at the gates of the late Archaic walls, which denoted emblematically the main cults of the city and thus bore cultic and apotropaic functions.³²

Altogether, the analysis of the various functions of defensive buildings is not an easy task and can only be achieved by a very careful and integrative study not only of the monument itself, but also of its various contexts and environments, and by a critical consideration of all aspects together. However, the result, even if well argued, will always remain hypothetical to a great degree since in this area of research we are mostly not dealing with hard facts, but only with more or less likely interpretations. And this is very important to keep in mind.

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³² Picard 1962; Holtzmann 1994; Geis 2007; Grandjean 2011, 128 with n. 12 and fig. 137.7 bis, 514–16, 573–4.

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THE CASTLE EURYALOS OF SYRACUSE*

Heinz-Jürgen Beste

Abstract

Traditional views on the structural development of the fort Euryalos at Syracuse assumed that the head of the Dionysian complex was situated on the height of the later five-tower bastion. Contrary to these views our investigations clearly showed that the western end of the walls leading around the plateau consisted of a defensive wall that was situated ca. 70 m further east and led across the saddle at a north-south angle (phase I). In the course of the rapid development of the defensive tactics at the time of Dionysios II of Syracuse the simple defensive wall on the ridge was considered insufficient despite its thickness. This wall was replaced by the so-called five-tower bastion (phase II), constructed to host new state-of-the-art Dionysian long-range weapons and to withstand attack from similar weaponry. After this complex consisting of five-tower bastion, fleche and moat C designed for sallies, the southern flank was also equipped with a moat (phase III). The rapid development of firearms kept having repercussions on this fort complex at Syracuse, where the three large Hellenistic towers, the characteristic moats A and B and the bastion wall were the most important of the innovations in phase IV. This article presents building phases I-IV in the light of the most recent research and reconsiders the functions of the Euryalos castle.

The focus of this contribution is the presentation of the fortification of Euryalos on the Epipolai plateau above the ancient city of Syracuse. The development of the castle Euryalos and the so-called long walls of Syracuse is inherently linked to the futile siege of the city by an Athenian armament in the years 415–413 BCE, which was vividly described by Thukydides (Thuk. VI, 96–103).¹ Although the city emerged strengthened by the victory over the Athenians, the ingrained fear of another siege

led the Syracusans to incorporate the plateau of Epipolai in a 20.5-km long wall situated above the city, into its defensive system.

The date of the construction of the castle is not known but it must be considered in connection with the construction of the walls of Epipolai built by Dionysios I around 402 BCE (Diod. XIV, 18).² No indication of the existence of a castle at the west tip of Epipolai can be

* This report is the written version of the talk given at the conference. Based on the collaboration between the Soprintendenza di Siracusa and the German Archaeological Institute, Rome Department, a new general plan of the city walls of Syracuse was produced under the direction of D. Mertens in 1991–1994. The investigation of the construction and new documentation of the castle was carried out by H.-J. Beste. The project was funded by the Thyssen-Foundation. In 2012 the results of the project were submitted by H.-J. Beste and D. Mertens for final publication by the Rome Department of the German Archaeological Institute and now appeared as *Sonderschrift* no. 18 of the institute with the title: “*Die Mauern von Syrakus. Das Kastell Euryalos und die Befestigung der Epipolai*”, see Beste & Mertens 2015.

¹ Awdry 1909, 70–8; Garlan 1974, 108–11.

² Meister 1967; Mertens 2006, 424–30.

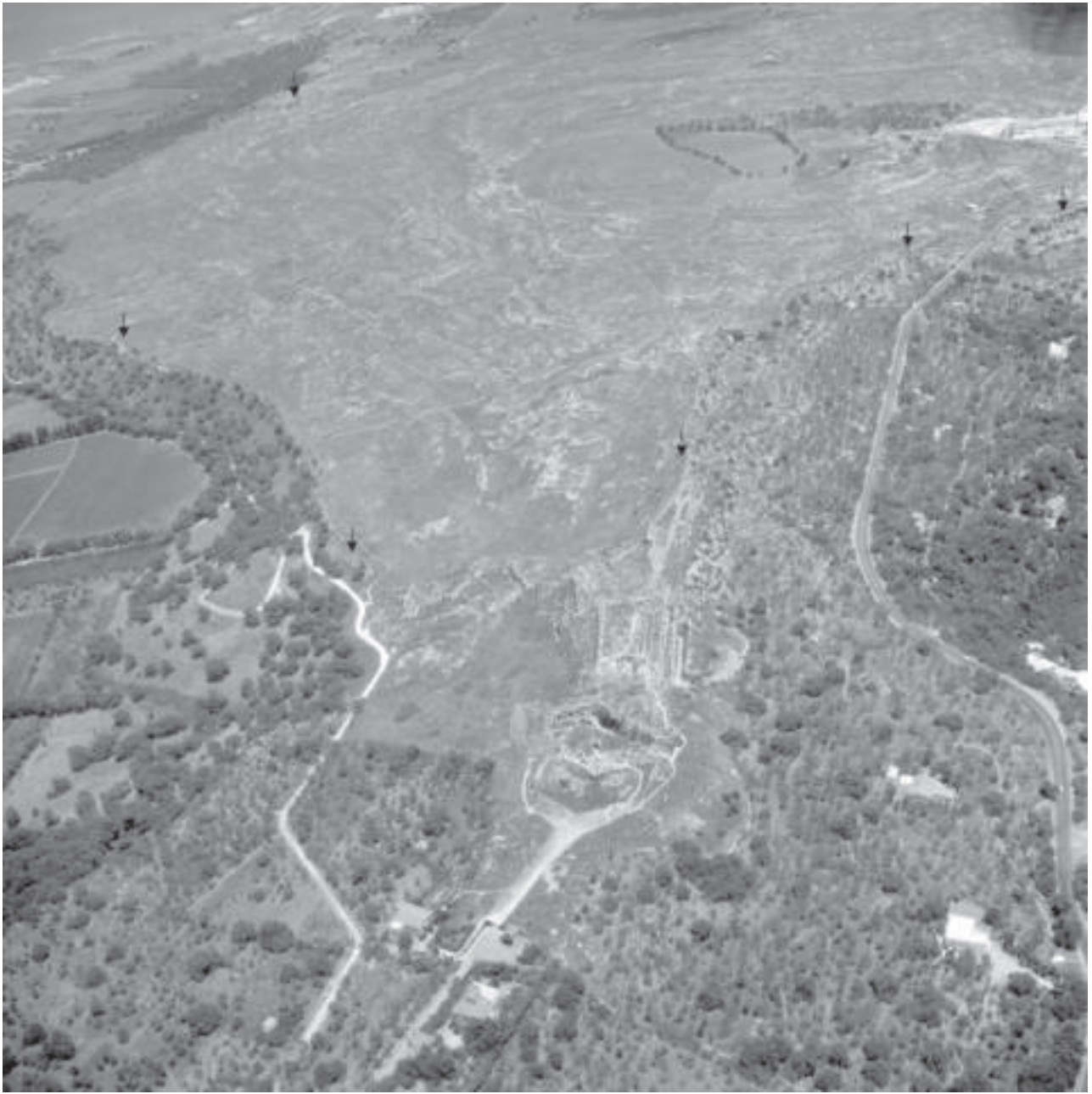


Fig. 1 The Castle Euryalos and the west tip of the plateau of Epipolai, panorama (D-DAI-ROM-SYR-69.10, H. Schläger).

verified at this point, but the existence of some sort of defence can be assumed, given the place's strategic importance for the city

The castle appears to have lost its military significance for the defence of the city after the capture of Syracuse by the Roman troops of Marcellus in 212 BCE, since Sicily was under complete Roman control at this time. In this two-hundred year period, four building phases can be

identified for the castle; each one reflects the latest advancements in military technology.

The Castle Euryalos ranks among the most magnificent and sophisticated fortification structures of the Greek world, with its underground galleries and staggered moats in the glacis. The castle is included in every large publication on Greek fortification and defensive structures due to its size of about 180 m in its north-south

and about 420 m in its east–west extension. Nevertheless, it has not been sufficiently published and studied.³ The goal of this essay is to emphasize the singularity of the castle as well as to present the succession of individual building phases and their reconstruction.

Topography

In order to fully grasp the unique fortifications and location of the castle, the landscape around Syracuse should be kept in mind. The castle is 8 km west of Syracuse, on the plateau which rises above the city. The foothills of the Climiti Mountains, which are situated parallel to the Bay of Augusta, stretch to the Ionian Sea in the east and allow for a coastline which is wide in some places and narrow in others. In the surroundings of Syracuse the southern foothills extend directly to the sea and thus form the plateau of Epipolai with sharp edges that fall off steeply to all sides.⁴

The Castle Euryalos is situated to the west of this plateau at the so-called “barrier of Belvedere”, a small, 200-m wide depression to the east, and it functions as an access to the abovementioned plateau (Epipolai); to the west it leads to its narrower continuation, the “hill of Belvedere”. The plateau measures about 3.7 km at its greatest north–south extension, in its east–west extension – excluding the small plateau to the west of the “Belvedere barrier” – about 7.2 km, and in total it encompasses an area of c. 1710 ha. To the east, the plateau slopes off steeply into the sea from a height of 10–15 m along the coastline of c. 4 km. It continually increases in height from the cliffs along the sea towards the west, until it reaches an average height of about 60 m.a.s.l. at the center. In its continuation to the west the terrain at the “barrier of Belvedere” reaches a height of c. 147 m.a.s.l. Its north and south edge slowly come closer until they are only separated by about 200 m at the “barrier of Belvedere”. The western end of the steadily ascending plateau is formed by the “hill of Belvedere” about 195 m.a.s.l., where the modern town of Belvedere is located.⁵

At the so-called “barrier of Belvedere” there is a foothill of the plateau, c. 400 m long and about 60 m wide, with towers of east–west orientation; this is the location of the Castle Euryalos. The castle is characterized by its superior

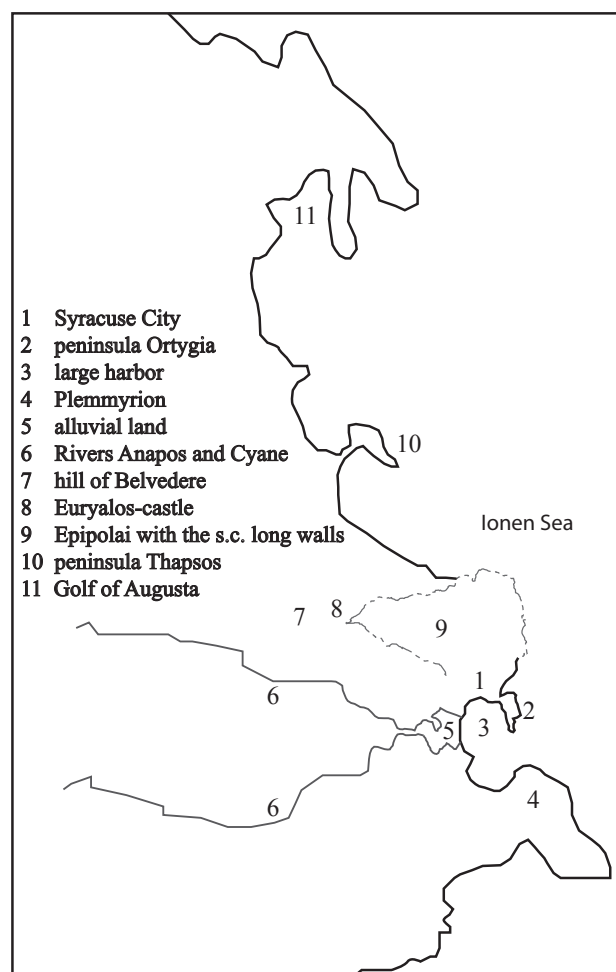


Fig. 2 Syracuse and surroundings (H.-J. Beste).

strategic position from where the most important shipping and land routes leading to the city of Syracuse can be observed. In the north, the view includes the Thapsos peninsula in the Bay of Augusta and the ancient city Megara Hyblaea, as well as the volcano Mount Etna, at a distance of 70 km, and the city Catania at its base. To the east it is possible to see the plateau of Epipolai and to the south the adjoining city of Syracuse, with the Ortygia peninsula and the large harbour. In the south the Maddalena peninsula is visible as well as the ancient Plemmyrion and the alluvial land of the estuary of the rivers Anapos and Cyane. To the west it is possible to see past the hill of Belvedere up to the Climiti Mountains and the source region of the rivers Anapos and Cyane at the base of the Hyblaeen Mountains.

³ Adam 1982, 248–51; Cavallari & Holm 1883; Garlan 1974; Winter 1971.

⁴ Beste 1996, 12–6; Beste & Mertens 2015, 127–204.

⁵ Drögemüller 1969, 11–20; 1973, 815–36.

When approaching the castle from the west over the cul-de-sac,⁶ the five-tower battery⁷ **7** can be seen first, with its walls still standing a couple of metres high. This construction almost entirely closed off the ridge in its entire width and functioned as the heart of the fortification. The foreground of about 185 m length and 60 m width is almost horizontal and even; it is occupied by a *flèche*⁸ **6**, a bastion-like polygonal wall (bastion wall **3**) and three graded moats (A **1**, B **2** and C **4**) that were cut into the natural rock. The originally uniform inner courtyard of the castle was later divided into a cortile **10** and a cistern courtyard **20** by the construction of a Byzantine oblique wall **16**. The connection of the land walls **21**, **28** with the castle is on the north side through the so-called tripylon **23** and for the south wall through the east tower **19**.

Current State of Research

The state of research for the Castle Euryalos can be summarized as follows: the researchers L. Mauceri,⁹ F. Krischen,¹⁰ Y. Garlan¹¹ and F. E. Winter¹² believe that in the beginning a simple wall stood in the location of the five-tower battery (FTB) **7** or that the *flèche* **6** in connection with the north wall **11** and the south wall **12** formed the western front of the castle. This was secured by moat C **4** which had been built through the extension of a natural crevice and used as a stone quarry. The western front was changed through the construction of the five-tower battery so that the wall or the connections of the north and south wall with the *flèche* were covered. E. Schramm¹³ and A.W. Lawrence,¹⁴ however, believe that the *flèche* was a later addition intended for the protection of the FTB and therefore it had to be increased in height. As the first security measure before the construction of the FTB they (Schramm, Lawrence) also assume a wall in this place.

In addition, the abovementioned researchers agree that moat B **2** and the bastion-like wall, the so-called bastion

wall **3**, were set in front of the five-tower battery during another expansion phase. This wall ended at the western edge of moat C **4** but according to the opinion of the abovementioned researchers it should continue to the north side of the FTB **7**. Moat B has been interpreted in such a way that the north and south side should be open so that they could function as a breakout moat for the built-over moat C.

According to my understanding the abovementioned assumption (earlier construction) relies on a misunderstanding of the relationship of *flèche* **6** and FTB **7**, particularly on the north side. The existing double-shell masonry between the *flèche* and FTB was interpreted as the remainder of the north wall. In reality the wall between the *flèche* and FTB is a later addition. Therefore the approach for the investigation of the castle relies on the interpretation of the *flèche* as an independent construction element, and on the evidence of an earlier wall east of the so-called Byzantine oblique wall **16**. This divides the expansion of the castle into four phases.

Short Description of the Castle 15

FIVE-TOWER BATTERY 7

The 32-m long five-tower battery has a north-south alignment and stands up to 8.0 m high. Despite its ruined state¹⁶ it still gives the impression of fortification because the blocks have exceptionally rough-hewn bosses (up to 7 cm). The battery consists of five massive pillars with a ground plan of c. 4.0 × 6.60 m and four chambers of c. 2.8 × 3.0 m. The pillars and chambers are constructed such that they allow for a level connection with the glacis (west side). The north wall **11** or south wall **12** is connected to pillar I or pillar V on the east side of the FTB. In addition there are three c. 1.80 m × 6.0 m and 6 m high projecting walls **9** that are situated centrally in front of the pillars II–IV.

⁶ In the past the nomenclature of the various parts of the castle has not been consistent throughout the publications and because of this a key was introduced for the new general plan. The numbering is from west to east without any classification in the order of the buildings. In the following essay the name of the structure in question will be given followed by the corresponding number from the key in bold.

⁷ Koepf & Binding 1999, 51; in the following abbreviated as FTB.

⁸ Koepf & Binding 1999, 182.

⁹ Mauceri 1928, 46, fig. 4.

¹⁰ Krischen 1941, 25–33; Fabricius 1929, 96–106.

¹¹ Garlan 1974, 186–9, 256–7, 355–6.

¹² Winter 1963, 377; 1971, 280–3, fig. 316.

¹³ Schramm 1925, 6.

¹⁴ Lawrence 1946, 99–107.

¹⁵ On the excavations in the area of the castle cf. Orsi 1904, 284–7; 1905, 390–1; 1909, 337–8; 1912, 299–303; 1915, 191–2; Mauceri 23–30.

¹⁶ It has been assumed that the reason for the collapse of the fort was the earthquake of 1693, Drögemüller 1969, 99, fn. 7.

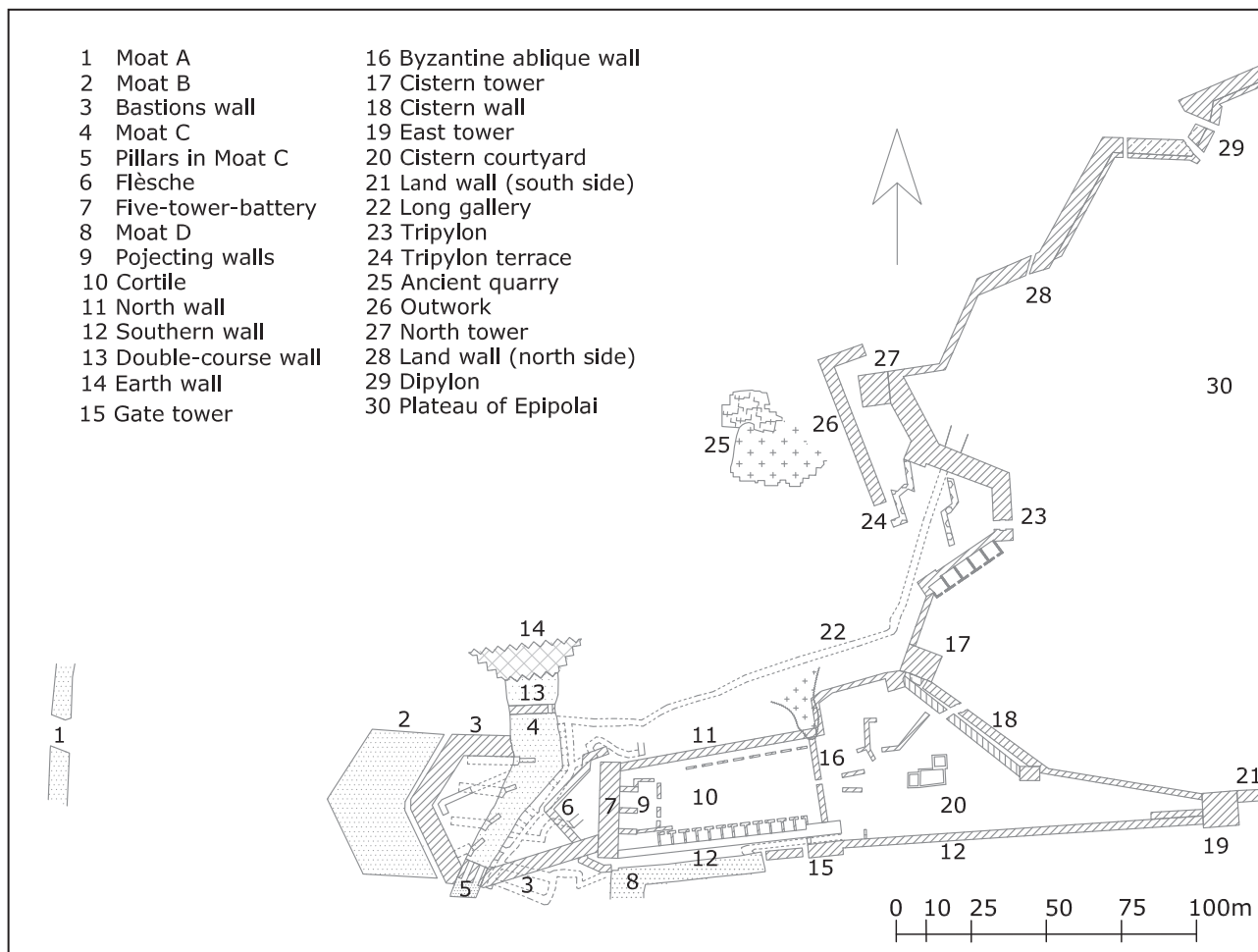


Fig. 3 Site plan of the Castle Euryalos (H.-J. Beste).



Fig. 4 The five-tower battery (FTB) from the west side, in the foreground moat B (D-DAI-ROM-SYR-89.174, H.-J. Beste).



Fig. 5 Moat C from the north side, in the foreground the double-course wall and in the background the three massive stone pillars (D-Dalrom-Syr-00697, H.-J. Beste).

THE *FLÈCHE* 6 ON THE WEST SIDE OF THE FIVE-TOWER BATTERY 7

On three sides (north, south and west side) a 2.70 m wide outwork is set in front of the FTB, the so-called *flèche*. The distance between its furthest point (west side) to the FTB measures c. 18.20 m and is across from pillar III. From here the distance continually diminishes towards the north and south side until it only measures 3.50 m in front of pillars I and V. The ends of the *flèche* are aligned in such a way that they surround the north and south side of the FTB at a length of c. 1.50 m so that there is one entrance on each side.

MOAT C 4

Moat C is located on the west side of the FTB and is one of four moats that runs through the glacis and the south side of the castle.¹⁷ This moat is 76-m long with a north-south alignment and does not cut through the ridge in a linear fashion but instead – as seen from the north – it curves out at the height of the FTB to the west, so that the distance to the FTB measures c. 12 m on the north side and c. 34 m on the south side.¹⁸ The width of the moat varies; it measures c. 16.50 m at the north end and c. 8.40 m on the south end. The greatest depth of the moat is 9.90 m at about the centre of the course of the moat.

The access to the moat is barricaded twice on the north side. First by an earth wall 14 of about 18 m width and a height of c. 4.30 m and then by a 2.80 m wide double-course wall 13 with a height of about 2.60 m, which is located about 10 m from the earth wall on its south side.

About 4 m from the southern end of the moat are three massive stone pillars 5 set up obliquely to the course of the moat with a height of c. 6.40 m.¹⁹

THE GALLERIES 22

A particularity of the castle is its numerous subterranean passageways, the so-called galleries that jointly measure about 430 m in length. With dimensions of c. 2.20 m wide and 2.10 m high they run below the glacis on the east and west side of moat C as well as the north and south side of the castle.

THE BASTION WALL 3

The bastion wall joins onto the southwest side of the FTB. From there it continues about 40 m to the southwest²⁰ and with the help of three stone pillars 5 it crosses moat C. A couple of metres further along it curves off to the north-west at c. 100 degrees and continues along

¹⁷ Moats A 1 and B 7 are also situated in the glacis of the five-tower-battery. Moat D 8 extends along the south side of the ridge, between FTB and tower gate 15.

¹⁸ Schramm 1912, 2–3, who interprets the curved shape of the moat as the result of its use as a quarry. Winter 1963, 372–73.

¹⁹ All three pillars are in the extension of bastion wall 9 that continued above them.

²⁰ However, it cuts through the *flèche* that is set in front of the FTB.

the edge of moat B. After about 30 m the direction of both the edge of the moat and the wall changes, so that both continue c. 30 m to the north-east. After the north-eastern corner of moat B the bastion wall curves at an angle of 120 degrees and returns east to the western edge of moat C where it ends.

The bastion wall is about 118 m long and in many sections only the foundation blocks can be seen. The bastion wall was constructed such that it consists of a massive outer course with chambers 2.0 m × 4.0 m in size arranged behind it. Along the south side the outer course has a width of c. 1.40 m but on the west side it is c. 3.0 m and on the north side c. 2.50 m wide.

MOAT B 2

Moat B is located directly in front of the bastion wall and probably was constructed at the same time since it has adopted the polygonal shape. Moat B is c. 22 m wide and c. 48 m long and does not completely cut through the ridge so that the rock on the side of the precipitous edge of the ridge still remains with a width of c. 6 m. Access to the moat, similar to moat C 4, is not possible. The south side of the moat was not completed and a stretch of about 12 m is only worked to a depth of 0.84 m.

MOAT A 1

Moat A is c. 185 m west of the five-tower battery and is the outermost moat of the castle. The moat completely

cuts through the ridge on a north-south axis at a length of c. 50 m and width of c. 6.50 m with the exception of a c. 6.0 m-wide middle bridge. A depth of not over 1.30 m indicates that the moat may not have been completed.

Organization of the interior of the castle

The walls of the castle surround a ridge with an east-west axis and length of 195 m. It has the form of a saddle and a surface of c. 5610 m². The courtyard of the castle, which was originally one space, was divided by a Byzantine oblique wall 16. This separated the courtyard into the cistern courtyard 20 (east) and the cortile 10 (west). In the area of the east tower 19 the ridge reaches its highest point and then steadily slopes off by c. 2.0 m to the Byzantine oblique wall and then finally returns to its initial height at the western end of the cortile. In the north-south direction the cortile and the cistern courtyard are roughly horizontal, with the exception of a larger terrain incision in the north-east of the cistern courtyard.

THE CISTERN WALL 18

The cistern wall is 3.30 m wide and c. 44 m long, and straight, made of double-shelled limestone ashlar masonry. At the lowest point of the wall a 2.80 m wide gate, the so-called cistern gate, was inserted at an angle of 118 degrees – i.e. obliquely – to the wall and makes it possible to access the interior of the castle.



Fig. 6 The original courtyard of the castle, today divided by a Byzantine oblique wall into the *cortile* (foreground) and the cistern courtyard (background) (D-DAI-ROM-SYR-90.168, H.-J. Beste).

THE CISTERN TOWER 17

The large cistern tower is 9.85 m x 11.14 m in size, has an east-west orientation and is unusual due to its location at the northern foot of the large ridge; although it secures the lower-lying gateway, the so-called tripylon, it is located inside the closed circular wall of Epipolai with the exception of its western wall.

THE TRIPYLON 23

The so-called tripylon gate **23** connects the castle and the city wall on the north side of Epipolai. As suggested by its name, it consists of three north-south 3.10 m wide and 6.0 m deep gates of which only the southern one is open and the other two gates are barricaded with ashlar blocks and have never been opened. The entire complex is located on the almost level and horizontal terrace of c. 60 m width. This includes the north tower **27** and the massive wall **26** set in front of it which can be referred to as a *proteichisma*. Above this is a navigable road leading to the plateau of Epipolai, as is evidenced by deep ruts. Probably due to the importance of this entrance a sizeable zangentor (pincer gate) was constructed here. The three gates frame a front with a length of c. 15 m. From either end of this front c. 30 m-long side walls protrude at an angle of 30 and 120 degrees respectively; together with the three towers they encircle a forecourt of c. 900m². The complex was reinforced defensively by one breakout gate each that was placed in the middle of the side walls, as well as by the extensions of the side walls that protruded in the form of rectangular corner reinforcements that cannot be interpreted as an independent tower.

Phases of the Castle

PHASE I

During the excavation 1992 season a c. 6 m-wide and 12-m long wall was excavated to the east of the Byzantine oblique wall **16**. Due to its location and structure it probably belongs to the first building phase and connected the north and south wall.²¹ The extent of the castle in phase I cannot be exactly determined but a wall surrounding the entire plateau of Epipolai

would have been useful for military reasons. It remains unclear whether a gate with a tower existed where the newly discovered wall connects to the south wall, which was then later replaced by the so-called gate tower **15**.

PHASE II

In phase II the castle was extended by about 70 m to the west and it acquired its 32 m-long front, the so-called five-tower battery (FTB) including the flèche and moat C. If the association of the flèche with the outwork of the five-tower battery appears to be conclusive then the designation of moat C as the defence of the flèche and FTB is less understandable based on its shape. However, if we consider the best defence mechanisms of the FTB it becomes clear that it was only effective through a joint system of moat C and flèche. The direct access to the five-tower battery was impeded by these two systems.

The improvements introduced in phase II consisted of a combination of battery, flèche and moat C. Its military function can be summarized as follows:

1. The wide and deep moat prevented the direct approach to the walls or forced the enemy to construct a ramp in order to cross the moat. The easy access of moat C from the castle through the galleries made it possible to quickly remove deposited material. In addition it was possible to send own troops into the moat in order to carry out a counterattack through the open north side of the moat, that was aimed at the hostile siege machines.
2. The massive, but not very high, wall of the so-called *flèche* fulfilled the function of a *proteichisma*. This is directly on the edge of the moat and served as a protection allowing continual shooting at the opposite edge of the moat with artillery fire.²² A direct shot was used, i.e. flat across a relatively short distance (fighting distance 50–100 m) in order to keep the flight time as short as possible.²³
3. The so-called battery with its 9 artillery positions was an artillery stronghold.²⁴ Catapults of various calibre were set up at such a height that they could shoot over the *proteichisma*. The height of the two-storey battery reached about 13 m in its reconstruction and forced the attackers to construct a siege tower of

²¹ On the construction development of the castle before the excavations in 1992 cf. Tréziny 1996, 347–52; Winter 1971, 314–5.

²² Winter 1971, 180–1, 184; 1997, 247–52, 287.

²³ Baatz 1990, 59–67; 1994, 136–45.

²⁴ Bakhuizen 1986, 315–22.



Fig. 7 The first phase of the Castle Euryalos, plan (H.-J. Beste).

approximately the same height, that would have been considerably heavier through its extreme height and more difficult to manoeuvre.

The building measures of phase II can be understood as an answer to the introduction of siege towers equipped with catapults and battering rams that were utilized during sieges. Phase II corresponds to the newest style of defence mechanism that had been developed against the abovementioned siege machines.²⁵

PHASE III

In Phase III the defensive system constructed in Phase II was extended: the south side was now secured by a moat which functioned like moat C as a combination of breakout and defensive moat.²⁶

PHASE IV

In Phase IV the castle was rebuilt on three sides. On the west side a bastion-like wall was added, the so-called bastion wall, as well as two other moats, the so-called

²⁵ On the handling of tower and battering ram Garlan 1974, 212–44 figs. 11, 12; Lendle 1975; 1983.

²⁶ The trench and gallery system does not have any direct comparisons in the Greek fortification architecture anymore and is reminiscent of the large moat system in Lilybaion, but it is unclear whether they mutually influenced each other directly. Giglio 2006, 272–74; Caruso 2006, 285–87.

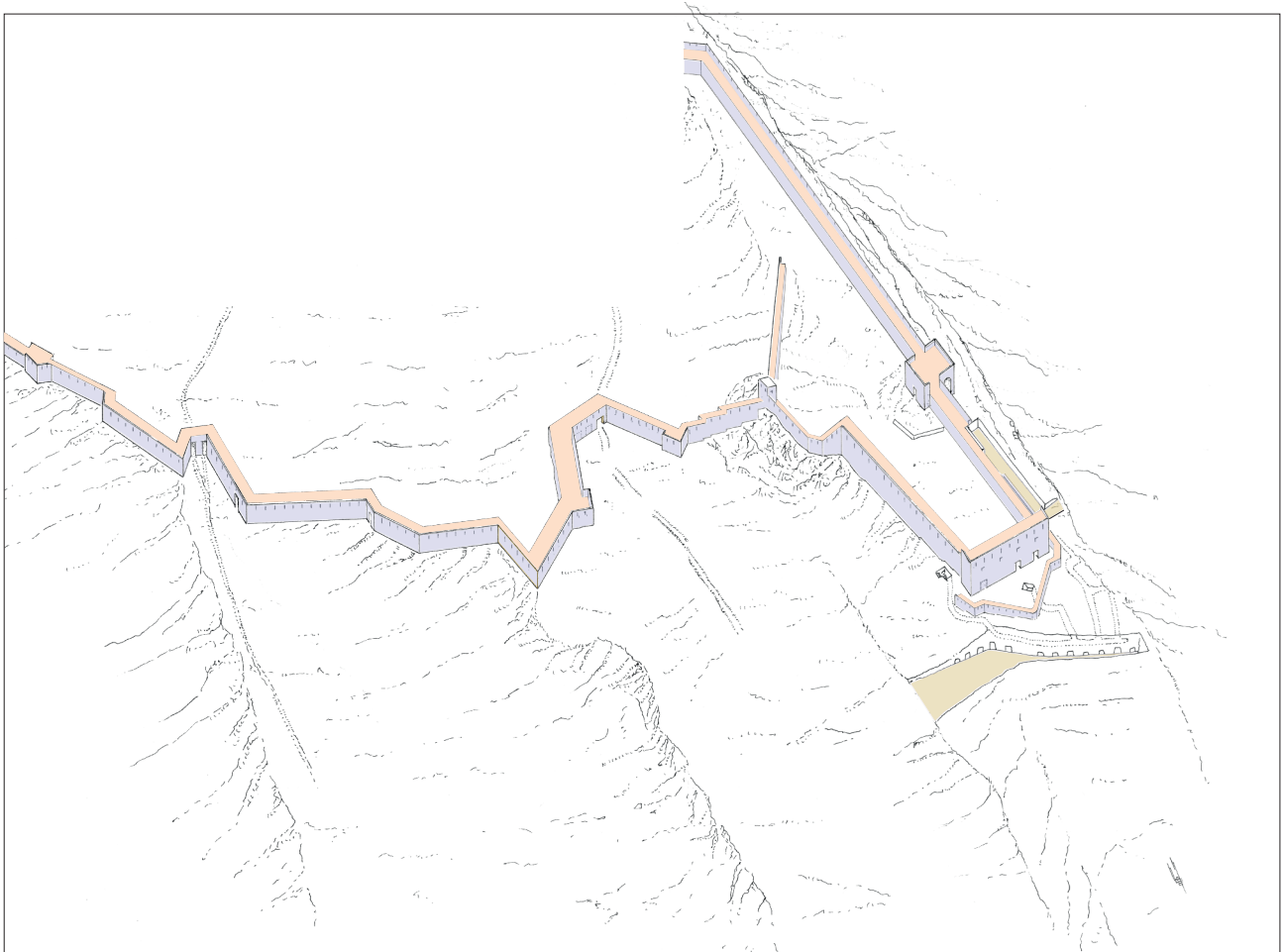


Fig. 8 The third phase of the Castle Euryalos, reconstruction (H.-J. Beste & M. Schützenberger).

moat A and B. On the north side two new towers were added to the wall, the so-called north tower and the so-called cistern tower,²⁷ in order to protect the tripylon gate. In addition the east tower secured the south side. These extensive building measures can be ascribed to the further development of artillery that reached its height in the third century BCE. Due to improved and standardized catapults the artillery gained in importance in the defence of walls at this time.²⁸ High multi-storey towers were constructed for the artillery and equipped with both large-calibre stone throwers and smaller crossbows.

The bastion wall constructed on the west side was constructed in a similar manner to the towers. Above a chamber storey – where probably dismantled parts of catapults were stored in times of peace – was a wide wall-walk where the catapults were set up in war time.²⁹ It provided enough space for at least 25 artillery positions. The north and south side of the ridge were better included in the defensive system through the polygonal course of the wall so that complete control of the glacis was possible; this would have only worked otherwise with a demi-bastion. The bastion wall was secured at

²⁷ On the development of this type of tower, cf. Karlsson 1989, 1992, 67–95.

²⁸ The importance of artillery can be seen in the occupation of Rhodes in 305–304 BCE by Demetrios Poliorcetes. The enemy attacks were stopped through massive artillery fire and it was possible to set the advanced siege towers on fire so that the siege was given up after a year. Marsden 1969–71; McNicholl 1986, 305–13; Säflund 1935, 87–119.

²⁹ Unfortunately, a concrete statement about the size of the crew in the castle is not possible. To get a clue about the occupation, it would be useful to excavate and to explore the settlement of the fort.

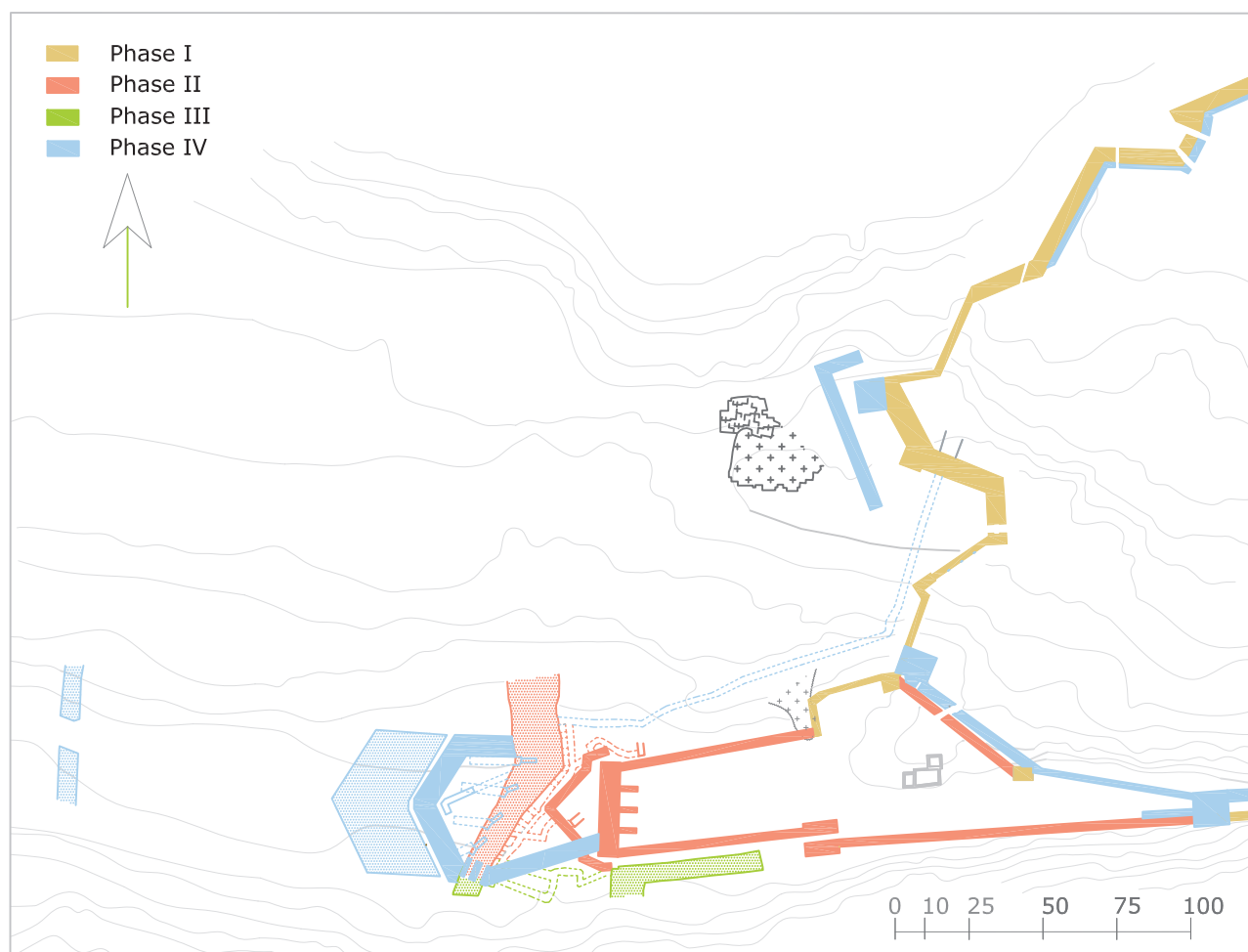


Fig. 9 The fourth phase of the Castle Euryalos, plan (H.-J. Beste).

its most vulnerable spot – at the rear of the ridge – by a 22 m-wide and 7-m deep moat that also had a polygonal course. In front of this at the most narrow point of the ridge was an obstacle-moat, so-called moat A. On this approximately 90 m long section of the glacis between moats A and B we must imagine that the artillery was quickly set up here during sieges in order to prevent the attackers from crossing the moat.

Conclusion

We can summarize that at the same time as the development of the plateau as a landscape fortress, the Castle Euryalos was constructed for its defence. This

can be seen in the wall course of Phase I where the north and south wall are joined and thus the circular wall was closed. This observation makes it possible to determine the builder and the time of construction of the castle with greater certainty than before. According to Diodoros, Dionysios I had the walls built on the north side of Epipolai (Diod. 18, 1–8).³⁰ Although he does not mention the construction of a castle, the castle and walls must have been planned and constructed together as explained above.

During the siege of Syracuse by the Carthaginians in 397/396 BCE the city was no longer attacked from the plateau which means that at this point the circular wall must have already existed even if it was not yet completed. This sets the time of the construction of

³⁰ Caven 1990; Mertens 1999, 143–9; Mertens 2006, 421–24.



Fig. 10 The Castle Euryalos, reconstruction (H.-J. Beste & M. Schützenberger).

the castle between the beginning of the building of the walls in 402/401 BCE and the siege by the Carthaginians c. 396 BCE. The first construction of the castle as well as the entire landscape defence can be attributed to Dionysios I.³¹ Later his successors carried out further expansions of the castle which were influenced by innovations in fortification technology and siege wars. Through the work on the north castle of Selinunte – which has been convincingly argued to constitute a good comparison – it can be stated that its last expansion phase was carried out by Agathokles. Thus the time period of the building phases of the castle took place between the end of the fifth or beginning of the fourth century to the beginning of the third century.³²

That the castle was barely mentioned by ancient sources and then only in general terms suggests that it did not greatly influence the events in the city. In my opinion, the reason for this is its considerable distance from the city.³³ At a distance of c. 8 km the castle did not function as a citadel where the rulers could flee in an emergency.

If the castle was not constructed for the direct protection of the city what function did it actually have? In order to answer this question we must again consider the topography of Syracuse. It is apparent that the inclusion of the undeveloped plateau of Epipolai into the defensive system of the city was essential in order to avoid a situation similar to that which occurred during the

³¹ Mertens 2002, 243–52; 2004, 29–34; 424–33.

³² Mertens 1996, 340–1; Mertens 2003, 256–58; Tréziny 1986, 185–200; Sconfienza 2003, 169–83; Garlan 1974, 184–5; Beste & Mertens 2015, 241–93.

³³ Beste 1999, 150–59.

siege by the Athenians. During this siege the Athenians began to construct a wall on the plateau, and cut off the city from inland roads.³⁴ For this reason the plateau was developed into a landscape fortification through the construction of a closed ring of walls that served as a buffer zone for the actual city territory during sieges. In order to be able to control and secure this approximately 1710 ha large area, a main base was needed. The city, as the previous military centre of defence, was not capable of securing the plateau due to its location. Instead a castle was constructed on the higher ridge of Epipolai for this purpose.

The foresight of the castle's builder is demonstrated by the fact that after its construction the city was no longer besieged from the plateau. The conquest of Syracuse by the Romans did not take place from this location but instead over the east side in immediate proximity to the city and this could not be attacked as long as the castle was not conquered, as Livy states (Liv. XXV, 25,2–12).

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³⁴ Drögemüller 68–97, 115–38.

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FORTIFICATIONS AND TOWN PLANNING IN KYRRRHOS: ITS HELLENISTIC ORIGIN AND ITS EVOLUTION

Jeanine Abdul Massih & Mathilde Gelin

Zusammenfassung

Kyrrhos/Cyrrhus in Syria, established during the Hellenistic period, is known as a Seleucus Nicator foundation. The polygonal rampart attributed to this period has been observed over nearly the entire city, except on a large part of the southern fortification. Since 2006, the Lebanese and Syrian Archaeological Expedition (Lebanese University – DGAMS) has been working on the site of Cyrrhus. The main research topics are the study of the fortifications and the evolution of the town planning. In this paper the latest results on the polygonal fortification of the first phase of occupation are presented along with analysis of the development of the early town: its limits and town planning and its evolution in the Roman (64 BC with Pompey's conquest), Byzantine and Islamic periods. The fortification in its actual state of preservation belongs, for the most part, to the Byzantine period. During the 6th century AD, under the reign of Justinian (527–65), the entire rampart was reconstructed, corroborated by several sources and inscriptions discovered on site. The study of the city wall uncovered some major interventions attributed to the medieval period. It is known that in 637, the city was conquered by the Arab army and named Qurus. It was re-occupied by the Byzantines in the early 11th century, and reconquered and dismantled in 1150 AD by Nur al-Din al Zengui.

Kyrrhos was founded at the beginning of the 3rd century BC. The strategic advantage of its establishment in a dominant position overlooking the region and near a river made it ideal for military purposes. Capital of the Cyrrhestic and built on the major communication routes, the site was connected with the main neighbouring cities and the Seleucid capitals. Fortified by its first occupants, the city is endowed with a citadel (Fig. 1). During Roman times, Kyrrhos appeared under the name of Cyrrhus and played an important defensive role throughout the Parthian wars. Several inscriptions and funerary stelae testify to the presence of a garrison of Roman soldiers, corroborated by the construction of a military camp in the western part of the city and the reconstruction of

the fortifications, particularly on the southern rampart. In Byzantine times, Cyrrhus became an episcopal centre and was attributed the title of metropolis by Justinian, who undertook a huge reconstruction programme on the fortifications. Through the Islamic period, the city maintained its military role: different restorations and reconstructions were observed on the entire rampart of the city and citadel.

The fortifications protect the entire city. They are built in limestone with two faces of cut stone, between which stands a filling of irregular stones and small re-used blocks in lime mortar. The faces are of hard limestone or soft blocks extracted from the surroundings.¹ The

¹ Observations made by J.-C. Bessac.

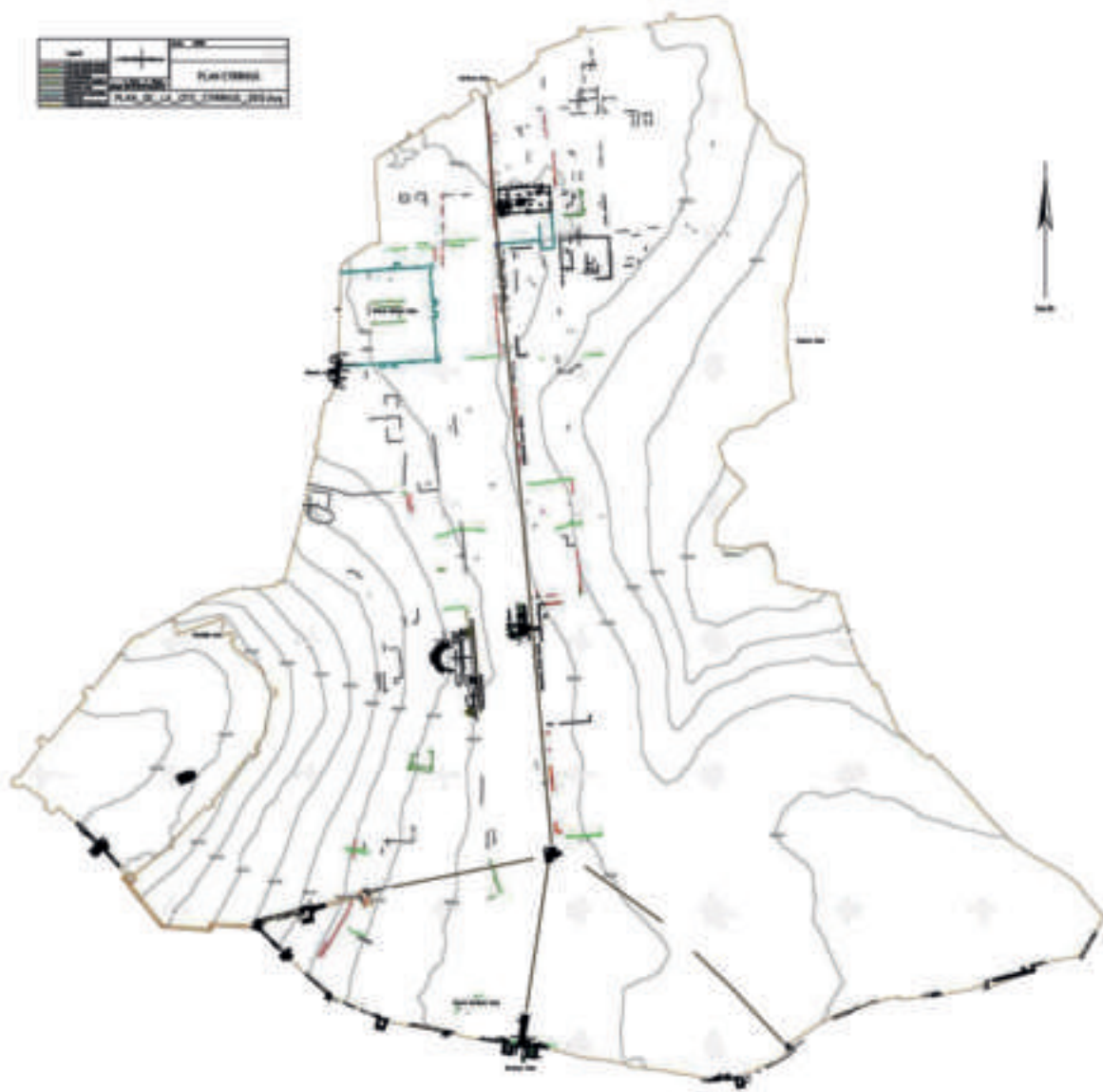


Fig. 1 Map of the site of Cyrrhus: results of all the works of the Lebanese-Syrian Archaeological Expedition (2012. S. Baier & S. Knechtel). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

use of these blocks is diverse, according to the phase of construction.

In some parts of the walls, a polygonal masonry is visible in the lower parts of the ramparts. The façades are constructed of large polygonal blocks, built without any use of mortar, and filled with irregular stones jointed with a reddish clayey compact earth. The blocks were extracted from the hard limestone of the surrounding

surface.² The faces of the stones are rough, only the surface in contact with the other stones is slightly worked. They were placed directly on the bedrock which had been worked to create horizontal platforms to receive the foundations. On the slopes, the upper part of the polygonal foundation constitutes horizontal stages disposed 'in steps' following the slope, as is seen on the curtain 2-3 (Fig. 2). The elevation is in soft modular limestone.³

² Observations made by J.-C. Bessac.

³ Dimensions of nearly 102 × 54 cm, the height of a course is about 47–8 cm.

Thirty-two towers have been counted – beside the ones flanking the gates – surrounding the town and the citadel. They are constructed in different shapes: square, rectangular, and circular or horseshoe, and implemented irregularly along the city wall. There are several gates and posterns.

The walls of the lower town are nearly three kilometres in length, with twenty-two towers projecting to the outside. Four gates marked the main axes through the city to the north, south, east and west and one postern opens in the western rampart, on the 16–17 curtain wall.

The citadel,⁴ established on the Qalaat hill, is rectangular in shape and measures 230 m north–south and 155 m east–west. The west and south ramparts continue the city walls, while the east and north ones are independent; a later square fort was built in the south-west angle. There are ten towers and two gates on the walls of the citadel. The monumental opening on the northern side connects the fortress with the lower town; the second is located on the junction between the citadel, the town rampart and tower I, overlooking the western side. The second

opening seems to be more a postern giving access to the area outside the citadel than a real gate.

The first rampart

The earliest fortifications represented by the massive polygonal blocks are generally hardly visible due to later repairs and reconstruction. Before our intervention, they had previously been revealed⁵ in two sondages excavated outside the southern wall of the citadel, and on the northern and western gates of the city. They are visible at different points of the eastern and the southern rampart, particularly on the summit of the slope running from the citadel towards the lower town.

The polygonal construction has been identified as the base or foundation of a soft stone wall. This elevation of the first rampart has entirely disappeared and was replaced by the Byzantine wall (Fig. 2). These observations were made on the northern wall of tower 3, on the eastern curtain of the tower on the slope, and



Above: **Fig. 2** Citadel, southern rampart, view from the north. Polygonal masonry in the foundation and Byzantine elevation.

Right: **Fig. 3** Northern wall and the door of the polygonal tower.

Left: **Fig. 4** Foundation of the polygonal tower under the Byzantine tower. View from the east.

All images ©Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.



⁴ The entire research programme on the citadel is under the supervision of M. Gelin.

⁵ From 1952 to 1990 the site was excavated by a French expedition directed by E. Frézouls (Strasbourg University).

partly re-used in the later elevation of the southern wall of the citadel. Frézouls dates this technique of construction to the Hellenistic period on the basis of parallels established with Seleucia Pieria.⁶

The research programme implemented for this study is built on surveys, topographical observations and archaeological sondages.⁷ The first phase of our research concentrated on the southern rampart and study of the town planning of the southern part of the city. Wider observations were also conducted on the entire fortifications of the lower city and the citadel.

The southern rampart of the citadel⁸

The excavations undertaken at the citadel brought new light on the early phases of the fortifications. First, the sondages undertaken by Frézouls at the base of the southern rampart were cleaned to observe and document the remains of the oldest construction of the wall. A new sondage was implemented beside the previous one, on curtain wall 2–3, outside the citadel, to establish the stratigraphy relating to the architectural installations.⁹ Unfortunately, no archaeological material was collected in direct connection with the first rampart. Succeeding levels, however, revealed material from the Hellenistic period (curtain 2–3) and the beginning of the Roman period (Tower 3).

Our studies focused on tower 3 of the southern fortifications, in the sector where polygonal construction was identified and because it was most probably built on the remains of a previous tower. In its current state, tower 3 proved to belong to the Byzantine period. The tower, measuring 8.6 × 8.3 m, is connected to the rampart and projects towards the exterior of the citadel. On its eastern side, the excavations showed that the defensive monument was founded on an older tower (Figs 3 and 4) of larger dimensions (external width N–S of 12 m), partly destroyed during the construction of the later phase,

which employed re-used blocks extracted from the earlier building, mortared with a very hard lime plaster of dark colour. These techniques of construction were observed in the foundations of the northern and western walls.

The tower with polygonal masonry, observed underneath tower 3, overlaps the rampart. Its northern wall and its entrance project from the face of the rampart towards the inside of the citadel (Fig. 5). The level of the floors and the threshold showed that after a short phase of abandonment, the building was reoccupied in the Roman period.

Though no archaeological material was found to date the initial rampart precisely, there are several associated factors that give us the opportunity to date these earliest defensive installations: 1) The city has a fertile territory with water resources. This is observed at other Hellenistic cities such as Apamea on the Orontes; 2) The city wall is established on the edge of a natural slope using the relief to reinforce the defensive system. This characteristic is widespread in Hellenistic military installations; 3) The construction of the foundation in polygonal masonry is similar to other Hellenistic fortifications of the region such as Seleucia Pieria and Apamea on the Euphrates; 4) The masonry of the elevation, composed of modular blocks of soft limestone fitted with white mortar, is of widespread use in Hellenistic fortifications in Syria, as can be seen at Antioch, Ibn Hani, Apamea on the Orontes and Dura-Europos on the Euphrates; 5) The lack of associated material underlines the fact that the polygonal installation represents the first phase of occupation of the sector; 6) The tower in polygonal masonry is situated under tower 3 and earlier than the first Roman occupation of the 1st century BC.¹⁰

These elements allow us to attribute the first rampart to the Hellenistic period, confirming the written sources. The current state of our research makes it impossible to propose an accurate date of construction. It can be related to a period that goes on for more than two centuries. We founded our research for the study of the citadel as well as for the southern sector of the city on this hypothesis.

⁶ Frézouls 1977, 179 and 191.

⁷ Study was also undertaken on survey images issued from geophysical surveys undertaken by C. Benech. See Gelin 2013; Abdul Massih & Gelin 2010.

⁸ Research undertaken by M. Gelin.

⁹ The excavation notebooks of the former expedition did not give any information about the discoveries from these sondages.

¹⁰ The material uncovered in the first layer above the bedrock revealed one pot sherd of the second half of the 2nd century BC (unpublished study undertaken by Abdallah Alaeddine). The sondage A revealed several Hellenistic sherds (identified by Sandrine Elaigne).

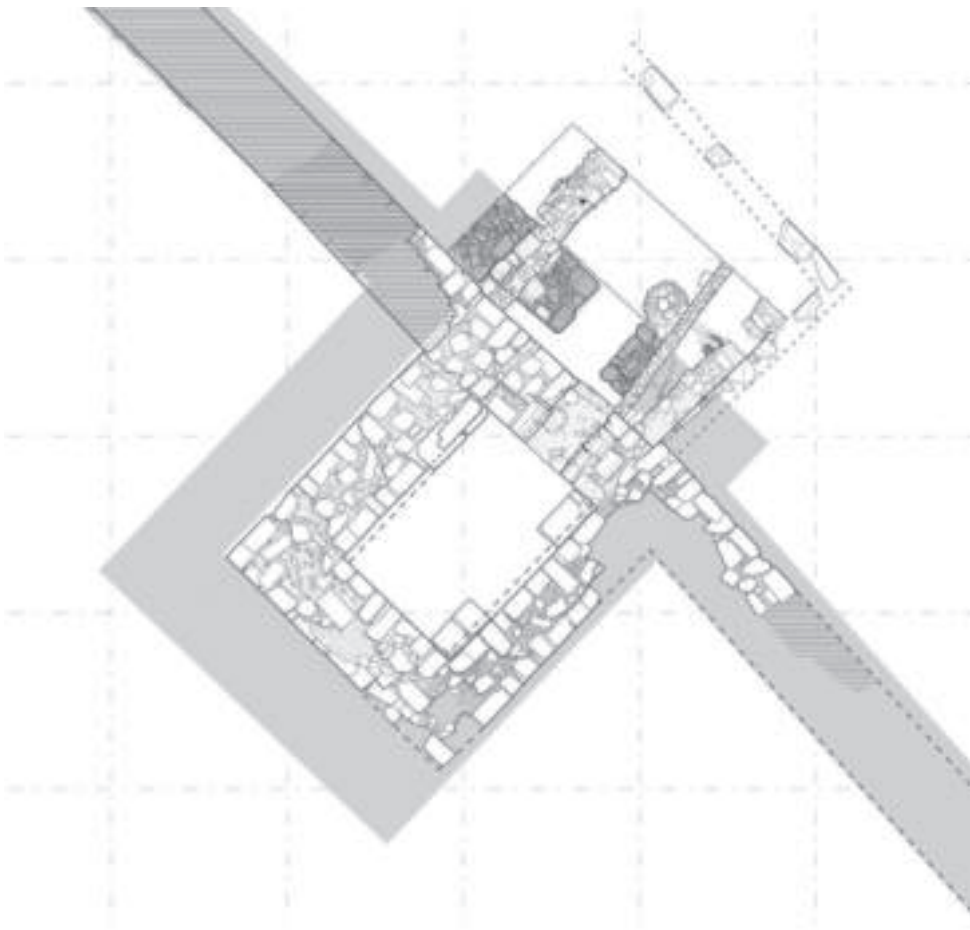


Fig. 5 The polygonal tower (in grey) under the Byzantine tower (J. Humbert). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

The first citadel¹¹

A series of towers built simultaneously with the curtains of the rampart comprise the citadel's defences. Its eastern and northern defensive walls, composing a single wall, are distinct from the rampart encircling the lower city which is connected to the southern and western rampart of the citadel.

The polygonal wall, visible on the southern rampart, is totally absent from the eastern and the northern walls of the citadel which are built entirely with dressed stones and founded directly on the bedrock. A sondage was excavated in the exterior angle of the southern and eastern walls showing the link between the angle of tower 4 and the eastern rampart.¹² The foundation of the eastern wall stands directly on the natural bedrock. The base of the northern wall is visible and is readable without excavation.

The western wall is more complex. A sondage was opened in 2011¹³ at the foot of the rampart outside the citadel, on an area that was relatively well preserved from the accumulation of destroyed substructure. The foot of the wall, lying on the bedrock, consists of a foundation made of re-used polygonal blocks embedded in dark lime mortar. It is the same technique that was observed on the northern and the western wall of tower 3, dating to the Byzantine period. However, on the western rampart we could not find the original masonry from which the blocks were taken. Only future research can determine the exact location of the original masonry. The re-used blocks can only suggest the proximity of the polygonal rampart.

These observations suggest that the original surface covered by the citadel was different from the actual preserved one. It is possible that it did not cover the entire surface but that it was established on the old

¹¹ Research undertaken by M. Gelin.

¹² The junction with the elevation of the tower is visible; the bases are hidden by a glacis made of large slabs.

¹³ Sondage excavated by J.-M. Gelin.

line of the southern wall and very close to the western one. Several areas of the southern and the western fortifications suggest the position of the limits of the first citadel which can only be uncovered through archaeological intervention.¹⁴

The First Wall: the southern rampart of the city

The remains of the first wall were uncovered on the eastern limits of the southern rampart. However, no trace of this installation was found on the southern gate or on the major part of the southern wall from about 40 m west to tower 5 to about 50 m east of tower 10. On this portion of the southern rampart of the city, the foundation of the defensive wall lies on the Roman line of fortifications followed later on by the Byzantine fortifications.¹⁵ From these observations, we had to determine and identify the southern limit of the first rampart of the city.

Immediately to the east of the citadel, we found an alignment of polygonal blocks, projecting outwards and then running towards the city to the east. The polygonal rampart then turns to the north-east, inside the city, before it disappears at about 150 m east of the eastern wall of the citadel. In the extension of this wall the polygonal masonry is replaced by a regular shaped blocks of various dimensions, most probably re-used stones (Fig. 6). The junction between these two masonries

creates an angle from which the new wall runs to the south-west towards the actual southern gate.

Following the logic of the builders, using the relief of the land and the direction and axis of development of the polygonal wall towards the north-east, we completed a survey on the slope where several blocks appeared lying directly on the surface near the washed natural bedrock. The cleaning of the alignment and levels indicated a progression towards the lower town. Nevertheless, the junction between these remains and the upper ones on the city wall did not develop on a regular line.¹⁶ Therefore, a sondage was dug at the point of contact between the polygonal and the later rampart on both sides of the wall (Fig. 6). Behind the junction, inside the city, the bedrock immediately appeared, with traces of pickets. These marked sectors show where the bedrock was levelled to prepare horizontal surfaces that could correspond to places of missing blocks constituting the faces of the rampart. Some blocks were still preserved on site. It was then possible to reconstruct the line of the earlier fortifications, similar in construction to the one observed on the upper part of the hill, which composed an angle allowing the line of the wall to turn towards the north-east (Fig. 7).

Further down the slope, about 50 m south-east of this portion of wall, an imposing tower about 12 × 16 m was uncovered¹⁷ (Fig. 8). The tower, overlapping the rampart, is built of polygonal stones similar in dimension and technique of construction to tower 3 discovered on the



Fig. 6 Junction between the polygonal Hellenistic and Byzantine ramparts in re-used ashlar blocks. View from the north-east. © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

¹⁴ We were not able to achieve this.

¹⁵ See Abdul Massih 2012.

¹⁶ This was achieved by the entire team of archaeologists and workers abandoning their sector to obtain rapid results on this discovery.

¹⁷ Work conducted by Sh. Al Shbib.

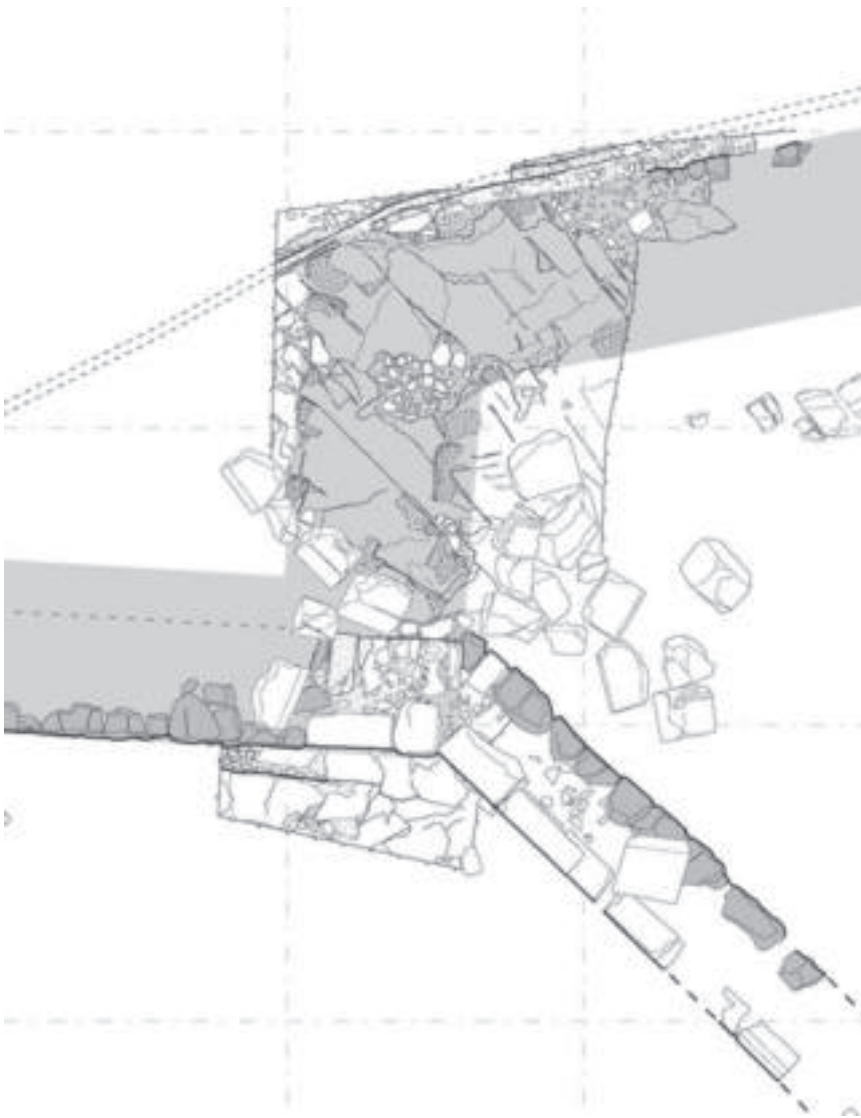


Fig. 7 The changes in direction of the rampart (left in polygonal, right ashlar blocks). The sondage revealed traces on the bedrock of preparation for the construction of the polygonal wall (Plan J. Humbert). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

citadel. The elevation of this structure was preserved in several courses on the eastern curtain. The similarity (same width) to the tower under the tower 3, visible only on its north side, offered us the possibility of reconstructing its entire plan. Finally, about 50 metres to the south-east of this newly revealed tower, in the middle of the slope, several alignments of polygonal blocks made it possible for Jean Humbert to reconstruct another tower of same dimensions as the two previous ones.

The tower at the south-east angle of the citadel and the two angled portions of the rampart are regularly spaced out at a distance of approximately 50 metres. On the plan of the remains, Jean Humbert showed, in a definitive and convincing way, that the tower on the angle was also built on a line of fortifications that could

be connected to the curtain wall leading to tower 3, with the same angle or discontinuity in alignment. We can also observe that the length of the curtain walls and the tower is approximately 100 cubits.

To sum up, the first rampart, in polygonal blocks, is composed of curtains of about 50 m long, punctuated with 'angles' or large towers. On the southern rampart (in part on the citadel and a portion on the slope leading to the lower town), three towers and three 'angles' were revealed.

It is clear, therefore, that the polygonal rampart was constructed following the topography of the relief. In the higher sectors, the wall is located on the edges of the slope, following a line of development towards the



Fig. 8 The polygonal tower on the slope of the citadel. Modular blocks constitute the curtain of the wall (Photo Y. Guichard). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

north to form a curve that turns towards the south-east. Again following the general relief, in the lower part of the curve a sondage was excavated on the axis of the main street, with the aim of revealing the first entrance related to the original defensive system, the southern gate of the first town.¹⁸

THE FIRST SOUTHERN GATE

Archaeological investigations were conducted on the main street at the exact location of the change in direction to reveal the first entrance to the city (Fig. 9). The concordance between the axis of the main street and the early fortifications offered us the opportunity to uncover a huge threshold in white limestone built on the width of the street. The remains discovered date to the latest phase of building before the extension of the city wall towards the south. The entire remains of the original entrance have been destroyed by successive occupation. Only the threshold is preserved, delimited on the southern side by the basalt pavement

of the street which strikes against the threshold of the original entrance. On this pavement the remains of the emplacement of the door, the sockets, were found: they are about 180 cm apart and about 20 cm in diameter. Study of the closing mechanism is still ongoing.¹⁹ It is possible to confirm the date of the threshold and the pavement of the street to its south to the same period as the last phase of occupation before the extension of the city wall and the town to the south.

THE EASTERN RAMPART OF THE FIRST CITY WALL

From this location, the rampart should turn towards the south-east, which consequently explains its absence from the southern wall and its presence in the south-east angle of the site, on the head of a slope above the river Saboun. These results gave us the opportunity to retrace and present a first restoration of the original line of the southern fortifications. These first conclusive results, as well as our suggestions on the continuation of the alignment of the rampart, were confirmed by the

¹⁸ Research conducted by J. Abdul Massih.

¹⁹ It is not impossible that the closing system belongs to a later phases. Future research will give us the opportunity to identify the chronology of the sector.

Fig. 9 Excavation of the first southern gate (2010). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.



geophysical survey implemented on the lower town on the southern sector.²⁰ The geophysical maps gave us the opportunity to firm up several details and potentially to discover new fundamental elements of the defensive system, such as a new gate and a probable advanced line of defence (Fig. 10).

Therefore, it is now possible to reconstruct the defensive system of the first city, in a way which is typical of Greek

fortifications: regularly spaced towers overlapping the rampart, gates, one of which is probably composed of two great towers protecting the passageway, and an outside wall – or moat (?) – doubling the line of the fortifications.²¹

Based on the observations made in the field and through archaeological research, we were able, in 2008 – the second year of the expedition – to determine the



Fig. 10 View of the south-west part of the fortifications, combining the geophysical mapping and the archaeological results (Plan J. Humbert, S. Baier & S. Knechtel; geophysical mapping C. Benech). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

²⁰ Studies undertaken by C. Benech. See Abdul Massih, Benech & Gelin 2009; Benech 2013.

²¹ See Gelin 2013.

alignment of the entire original Hellenistic rampart. This early city occupied a more restricted area than the later phases but used all the possibilities offered for its defence – both active and passive – with natural elements such as the relief playing a determining factor. The Hellenistic fortifications were conceived to exploit these possibilities at their best. The extension towards the south, visible today through the final rampart and the late southern gate, goes back to the Roman and Byzantine periods.

The Urban Plan and the Southern Gate²²

The main street runs from the northern gate toward the south on a rectilinear alignment and constitutes the main axis of reference for the orthogonal urban plan (Fig. 1). This Hippodamian design, implemented during the earliest occupation, seems to have been respected during later phases of occupation since it is still visible on site. Divided into regular *insulae*, it aligns on the main street delimited by the two main gates. The excavation of the original southern gate gave us the opportunity to note a destroyed area on the northern side of the door and to reveal the presence of the basalt pavement on the southern side. The uncovering of the pavement gave us the opportunity to verify the extension of the street outside the limits of the early city.

Two routes were defined running out from the early entrance. The first one developed towards the south-east, toward the southern rampart at its lowest topographical point near tower 10. The street is indicated, in our excavation on the early gate, by a row of rectangular limestone bases aligned along the basalt street. This road was most probably used to connect the city to the river where remains of bridges testify to the presence of a major communication route leading towards the east to the city of Zeugma. Very few remains of this road can be identified on site. There was no archaeological work conducted in this area and on the geophysical maps it appears as a shadowed perturbation, due to its earth constitution, and is likely to have been entirely destroyed by later occupation. The second street develops from the early southern gate towards the south-west. This paved street was uncovered for about 15 m and was re-used by the alignment of the extended main street. On the

basalt pavement and on the threshold, traces of wheel ruts incised in the stones in a curved alignment towards the southern entrance testify to the changes of direction towards the south-west to the actual southern gate.

The chronology of the building of the street was established according to the results obtained in the sondage on the main street, near the church located east of the theatre²³ (Fig. 1), along with observations made on the southern gate and on the portion of the main street located between the two southern gates. The limits of the original street are the borders of the *insulae* giving a width of 17 m to the passageway.

During the Roman period, the urban plan retained its characteristics and underwent several modifications such as the implementation of a new axis of circulation connecting the two new openings, the western and eastern gates of the city.

On the two perpendicular main streets, porticos were installed on both sides, with a width of 5 m. The main street became a colonnaded street with a 7 m passageway between the porticos. At this time the entire street was paved with basaltic stones. This pavement was observed in a sondage located east of the basilica, on the church situated east of the theatre and on the southern gate.

This entirely paved street remained in use until the Byzantine time when it was raised in some sectors by a second row of basalt. This street respects the general axis of circulation and the urban plan of the city. In the first Byzantine phase, the main street used the former Roman installations, including the porticos. Later on, the street was encroached, occupying the porticos. The construction of the church located east of the theatre, in the last phase of occupation, reduced the width of the street by incorporating the porticos into the constructed building.

Later, in the Islamic period, the passageway was reduced to less than 4 m in width. Several structures of these late periods were found on the street at higher levels than the basalt pavement.

The chronology of the main street located between the north gate and the change of direction needs to be

²² The programme of research on the town planning and the evolution of the urban plan, along with the studies on the southern gates, have been undertaken by J. Abdul Massih. See Abdul Massih 2013b.

²³ This sondage and the entire excavation undertaken on the church were opened by the previous excavators. Unfortunately, there is no documentation in the archives or publication of these works and only few pictures were uncovered in Frézouls' archives. See Frézouls 2012.

completed by future research. The investigations to be conducted on the extension of the main street to the south will lead us to the identification of the nature of the late buildings in the southern area of the city and will help us to correlate the phases between the built up area and the defensive system.

The late southern gate

The research undertaken on the late southern gate was based on the establishment of the chronology of the different defensive constructions and the study of their relation with the main street. Sondages were opened on the north face of the eastern tower (inside the city) and at the junction of the western tower with the western curtain wall (in the exterior angle) (Fig. 11). These investigations did not reveal any occupation or level of circulation earlier than the Roman period. The lack of evidence of earlier occupation and construction confirms the results of the investigations made on the polygonal fortifications. The information given by the sondages and the analysis of the phases of construction of the gate and its surroundings gave us the opportunity to establish a relative chronology

and to propose a date for the buildings in the sector based on study of the ceramics. The earliest proposed date for this sector belongs to the Roman period and more precisely to the 2nd century AD²⁴ corresponding to the southern extension of the city. As for the first reinforcement observed, it may be related to the rise in Sassanian threats at the beginning of the 3rd century.²⁵

About 50 cm beneath the actual level of the paved street, remains of an earlier pavement in basalt were discovered in the sondage against the northern façade of the eastern tower (Fig. 12). The slabs of hexagonal shape of this first street are well arranged, covering a drain with long flat stones of basalt. One of the covering stones is a base of a limestone column that, by its position, belongs to a colonnade portico of an earlier street.

During the second Roman phase, the city extended towards the south and the final line of fortifications was constructed cutting through the buildings of the first Roman period. During the Byzantine reconstruction ordered by Justinian, the southern gate was installed on the alignment of the Roman wall and the main street. It comprises two towers built with re-used blocks, probably taken from a nearby monument, as observed on the



Fig. 11 Aerial view of the southern gate and the main street (Photo Y. Guichard). © Lebanese-Syrian Expedition of Cyrrhus-Nebi Hour.

²⁴ Study of the pottery is still ongoing. Some sherds dated to the 1st century AD.

²⁵ The date is confirmed by the pottery excavated from the sondage by the eastern tower of the southern gate.



Fig. 12 Sondage against the northern façade of the eastern tower of the southern gate of the city. ©Lebanese-Syrian Expedition of Cyrrhus-Nebi Houri.

façade of the entrance, the only portion remaining of the original construction. The passageway between the two towers of the main gate is characterized by a street paved with basalt inserted between two sidewalks of limestone (Fig. 12). A threshold in limestone separates the inside of the city from the outside.

The internal structure of the towers and of the entire gate was subject to repairs and reconstruction during the Islamic period.²⁶

The fortifications in ashlar masonry

The study of the fortifications proved that the actual visible elevation, belonging to the Byzantine period, is mainly built on the polygonal wall and had late modifications and restoration. During the Byzantine period significant reconstruction was undertaken on the defensive wall, as attested on several areas of the fortifications. The entire ramparts of the city and of the citadel were rebuilt with the same technique of construction²⁷ and were reinforced by towers and bastions. The number of flanked structures was frequent in this period, like additional towers built on the wall curtains that were judged, at an earlier phase, naturally defensible.

The date of these architectural modifications are determined from the finds, as ceramic was collected in numerous sondages. Analysis of the ceramics is still ongoing. Nevertheless, the excavations undertaken on tower 3 gave us ceramic material belonging to the Byzantine period. Other archaeological material such as inscriptions and the written sources gave us further indications. On site, three inscriptions were found dedicated to the emperor Justinian as constructor of the fortifications of Cyrrhus.²⁸ Procopius corroborates the inscriptions by mentioning the reconstruction works undertaken by the emperor at Cyrrhus. This reconstruction programme established by Justinian to reinforce the defence of the Empire is attested at several other sites, such as Halabiya, Resafa, Sourra, Circesium, Dibsi Faraj, Barbalissos, Membidj (in Syria), Constantinople, Dara, Amida and other sites (in Turkey), along with several ones known in Asia and North Africa.

In spite of the differences in topography and geographical position, and of the type of interventions and history of all these sites (presence of earlier phases), parallels can be established on the composition of the defensive system and the type of techniques and material of construction.

In several cases, as in Cyrrhus, the Byzantine settlements are re-occupations of Hellenistic sites; however, other foundations specific to the Byzantine period clearly show the use of topography for the new development,²⁹ as in Halabiya, Tall As-Sin, Dara, or Caričin Grad. The topography of the site and the position and role of the fortifications determine the distances between the towers. No specific regularity of implementation was observed in Cyrrhus, except on the southern rampart where the towers are spaced 62 m apart.³⁰

The building of stone fortifications and the multiplication of towers with different shapes, for example square, rectangular, circular, pentagonal and polygonal models, their implementation and regularity, are considered as characteristic of this period.³¹ Three forms are represented in Cyrrhus: square, rectangular, and circular or horseshoe. Finally, the excavation of the Byzantine

²⁶ Important deposits of the Omayyad period were unearthed from the southern gate. See Abdul Massih 2013a.

²⁷ Abdul Massih 2013a

²⁸ See Alpi 2011 341–9; Frézouls 1969 27–34; *IGLSI* 145–7 (date 529–32 or 542).

²⁹ Foss & Winfield 1986, 7–35; Diehl 1896, 138–45; Giros 1993, 30–53.

³⁰ The distance varies from site to site: it is 35 m at Halabiya and Tall As-Sin, 45 m at Caričin Grad (the towers of the acropolis), between 45 m and 75 m at Resafa, and 50 m at Dara.

³¹ Diehl 1896, 155; Duval 1983, 149–85. At Resafa three other types are in use: round towers for the angles, three towers with a U shape, three pentagonal towers and rectangular ones, Gregory 1996, 88–166. On other fortifications only rectangular towers were utilized, as in Halabiya, Zalabiya and Tall As-Sin. Nevertheless, the majority of the towers at Dara are of horseshoe form.

fortifications at Cyrrhus revealed the presence of a new technique, alternating towers and bastions³² (Fig. 1).

Conclusion

To conclude, we can present two major phases of construction of the fortifications of Cyrrhus. The earlier one goes back to the Hellenistic period and the second phase is attributed to the Byzantine. Nevertheless, we observed several modifications and reconstructions during the Roman period that for the time being remain unstudied. The evidence uncovered on tower 3 of the citadel, on the southern gate and on the fortifications belonging to this period, need to be examined and new investigations must be initiated in the near future to determine the nature of the Romans' defensive programme.

Finally, the archaeological investigation revealed and confirmed the presence of a later phase of fortifications belonging to the Islamic period. Several repairs and restorations were observed on the rampart of the city and it is most probably during this phase that the entire internal line of fortifications of the citadel was implemented in its final location.

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³² This technique is observed on other sites such as Dara, Amida and Tall As-Sin: Al Shbib 2009, 169–86.

FORM, FUNKTION UND BEDEUTUNG DER STADTMAUERN VON PERGE IN PAMPHYLIEN

Wolfram Martini

Zusammenfassung

Neben der griechisch geprägten Befestigung der Oberstadt auf dem Tafelberg, die seit hellenistischer Zeit durch ein komplexes System von Türmen, Bastionen, Sichtblenden und Ausfallpforten für die Offensivverteidigung gekennzeichnet ist, weist Perge auch eine Befestigung der Neustadt auf, die sich seit dem 1. Jh. v. Chr. in der Ebene südlich des Tafelbergs ausbreitete.

Die Wiedergewinnung des Befunds der Stadtmauer der Neustadt in ihrer ersten Phase dokumentiert durch den Verzicht auf einen dem Gelände angepassten, strategisch begründeten Mauerverlauf, durch die stark an dem orthogonalen Straßenraster orientierte Gesamtform, durch die Ausrichtung der hauptsächlichen Stadttore auf die ankommenden Hauptstraßen vom Flusshafen, vom Seehafen und vom westlichen Kleinasien (Via Sebasté) und durch diverse schmuckhafte Details einen völlig anderen Stadtmauertypus, der in starkem Gegensatz zu der Befestigung der Akropolis steht und mangels griechisch-hellenistischer Vorbilder eher von römischem als griechischem Formen- und Gedankengut geprägt zu sein scheint.

Während die aufwendige Befestigung der Akropolis vor allem im Bereich des Südhangs mit der 22 m breiten Prozessionsstraße primär dem Schutz der Akropolis mit dem Heiligtum der Artemis Pergaia diene, hat die anfangs nur durch Tore und Türme repräsentierte Stadtmauer der Neustadt primär machstähetische, wirtschaftliche, religiöse, allgemein ‚symbolische‘ Funktionen und ist vor allem Ausdruck der Selbstvergewisserung einer sich in der *pax Romana* neu formierenden Bürgerschaft. Daraus resultiert in Analogie zu Städten im Westen des Imperium Romanum ein neuer Datierungsvorschlag für die Stadtmauer der Neustadt in augusteische Zeit.

Perge,¹ am Westrand der pamphyliischen Ebene am heutigen Golf von Antalya gelegen, besteht aus einem Stadtteil in der Ebene und einem Stadtteil nördlich auf dem Tafelberg, einer Akropolis. Drei Straßen verbanden

Perge mit dem Umland, im Nordwesten die spätere Via Sebasté, im Osten die Straße zum Flusshafen am Kestros und im Süden die Straße zum Seehafen Magydos; in der frühen Kaiserzeit kamen eine zweite Straße zum

¹ Abbasoğlu 2003, 1–12; zuletzt Özdiş 2012 mit weiterer Literatur. Halûk Abbasoğlu (Istanbul) danke ich herzlich für die großzügige Genehmigung und Förderung meiner Anliegen und für seine und seiner Mitarbeiter Hinweise und Hilfe. Danken möchte ich auch Heliodoro Ruiperez (Madrid), der die Visualisierung Stadtmauer nach meinen Wünschen vorgenommen hat. Schließlich danke ich Harald Zühlendorf (Gießen) für seine Hilfe bei vielen arbeitstechnischen Bitten.

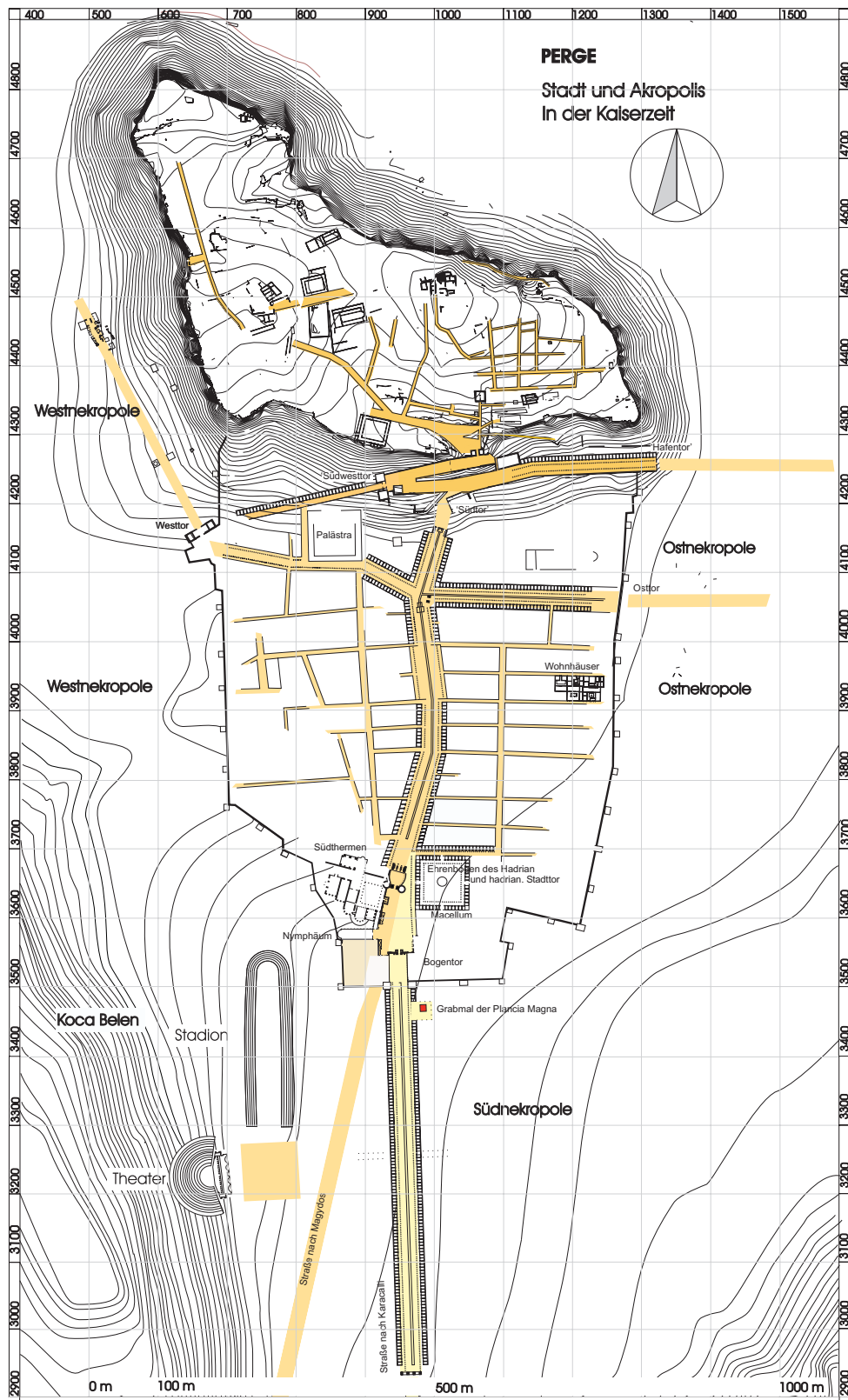


Abb. 1 Perge. Stadt und Akropolis in der Kaiserzeit (W. Martini).

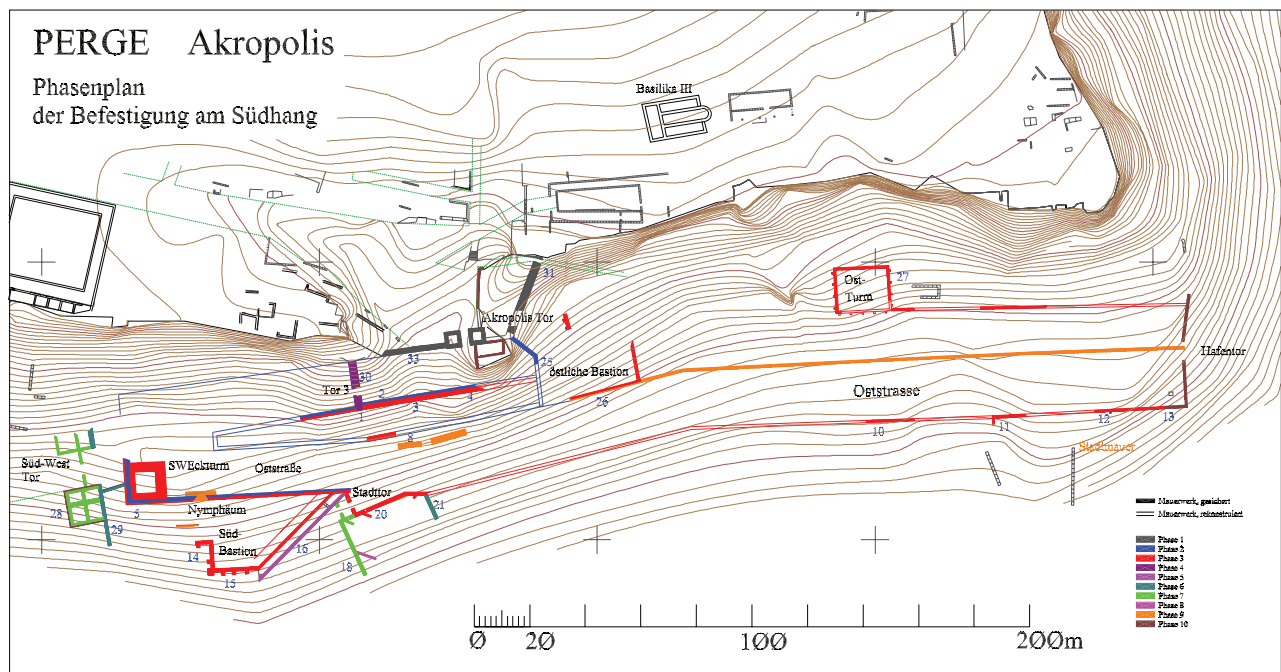


Abb. 2a Perge. Plandetail der Befestigung am Südhang der Akropolis (W. Martini).



Abb. 2b Perge. Rekonstruktion des mittleren Bereichs der Befestigung am Südhang der Akropolis mit der Sakrallandschaft am oberen Bildrand (K. Wolter).

Flusshafen und eine weitere Straße nach Süden hinzu. Sie waren maßgeblich für die Konzeption der Befestigung und ihrer Haupttore. Der Gesamtplan von Perge (Abb. 1) zeigt, dass sowohl die Akropolis als auch die Stadt in der Ebene in sehr unterschiedlicher Weise befestigt waren.

Die Befestigung der Akropolis folgt dem Rand des Tafelbergs² mit höchst differenziertem Verteidigungs-

system an der weniger steilen Südseite, während die Stadt in der Ebene durch einen relativ geradlinigen Mauerverlauf ohne Rücksicht auf die Topographie bestimmt ist. Das Plandetail der Befestigung des Südhangs (Abb. 2a) und die partielle Rekonstruktion der westlichen Hälfte (Abb. 2b) verdeutlichen das komplexe System einer für die Offensivverteidigung konzipierten Fortifikation mit Türmen, Bastionen und

² Allerdings ist die aus dem anstehenden Felsen ausgehauene vorrömische Stadtmauer (mit Wehrgang) nur noch an der Westseite in einem kurzen Abschnitt erhalten, Martini 2003, 40–1.

Ausfallpforten hinter Schildmauern.³ Vermutlich im 5. Jh. v. Chr. begonnen, dürfte die Befestigung weitgehend im 3. Jh. v. Chr. ihre endgültige Gestalt gewonnen haben. Ziel dieser aufwendigen Anlage war der Schutz der Akropolis, die auch das Heiligtum der Artemis Pergaia beherbergte, das teils als Sakrallandschaft mit zahlreichen wasserführenden Grotten und monumentaler Votivterrasse, teils als architektonisch gefasster Bereich gestaltet war.⁴ Die vor allem von Osten, vom Flusshafen, dorthin führende Prozessionsstraße, eine gewaltige Plateia von 22 m Breite im unteren Bereich und immerhin noch 17 m im oberen Bereich (Abb. 2a) erforderte besondere Schutzmaßnahmen, die nach und nach offenbar gemäß dem Vorbild griechischer Befestigungsanlagen vorgenommen worden sind. An den Anfang, spätestens in das 5. Jh. v. Chr., sind die Befestigung der Akropolis selbst mit einem von zwei Türmen flankierten Tor und der Ausbau der Straße von Osten an dem relativ steilen Südhang zu datieren. Dafür waren bis zu 15 m hohe Stützmauern erforderlich, die Quader bis zu 2,10 m Länge und 80 cm Höhe aufweisen. Erst in einer späteren Phase, vielleicht in der zweiten Hälfte des 4. Jh. v. Chr.⁵ wurden darauf Befestigungsmauern mit Wehrgang aufgesetzt und ein Zwischentor (Tor 3) eingefügt, so dass ein 15,50 m × 60 m großer Zwinger vor dem sog. Akropolistor entstand.

An der großen Kehre der Prozessionsstraße sicherte ein monumentaler quadratischer Turm mit 14,50 m Seitenlänge den Zugang von Westen, der im 2. Jh. v. Chr. durch ein monumentales Tor befestigt wurde. An der Ostseite wurde der Zugang vom Flusshafen durch eine unter einem 8 m hohen Schutthügel verborgene Toranlage (Hafentor) geschützt.⁶ Nach Süden zur Straße zum Seehafen war die Prozessionsstraße nur durch eine unbefahrbare Rampe und ein stark bewehrtes, trichterförmiges Tor angebunden. Die relative Abfolge der insgesamt zehn Bauphasen, von denen sieben Phasen vorrömisch sind, ist zwar weitgehend gesichert, doch fehlen absolute Datierungen der einzelnen Phasen, da die wenigen Sondagen keine datierbaren Funde erbrachten.⁷

Das mag genügen, um zu zeigen, dass die Befestigung der Akropolis in erster Linie durch strategische Gesichtspunkte bedingt war. Die Schmuckhaftigkeit der hohen Mauern und Türme aus weißlich-gelblichem Kalkstein in frischem Zustand, die durch den Kontrast mit der Straßenpflasterung aus einem gelbbraunen Kalksandstein noch gesteigert wurde, war vermutlich nicht beabsichtigt, da dies die lokal anstehenden Baumaterialien waren, mag aber durchaus wahrgenommen worden sein, so dass die Befestigung mit Aristoteles sowohl Wehrhaftigkeit als auch Schmuck der Stadt repräsentieren konnte.⁸

Der Blick auf den Gesamtplan von Perge (Abb. 1) gibt zu erkennen, dass die Befestigung der vielleicht in späthellenistischer Zeit neu angelegten Neustadt⁹ in der Ebene südlich des Tafelbergs einen völlig anderen Charakter aufweist. Ausgehend von der Südseite der Akropolis in ihrer maximalen Erstreckung orientieren sich die östliche wie westliche Stadtmauer als weitgehend geradlinige Mauerzüge an der Himmelsrichtung von Nord nach Süd; dementsprechend und in Übereinstimmung mit der weitgehend orthogonalen Struktur der Stadt würde man eine etwa rechtwinklige Ostwestausrichtung des südlichen Stadtmauerabschnitts erwarten; doch der heute sichtbare Mauerverlauf weicht deutlich davon ab. Schon Mansel¹⁰ hatte erkannt, dass der südlich vorspringende Teil der Stadtmauer aufgrund zahlreicher kaiserzeitlicher Spolien spät- oder nachantik sein muss. Der Mauerverlauf bleibt dennoch eigenartig, denn der Südabschnitt der Stadtmauer verläuft in Nordwest-Südost-Richtung und widerspricht dabei sowohl dem im Wesentlichen orthogonalen Straßensystem in der Stadt als auch der Topographie, denn der Geländeabfall von West nach Ost um fast 8 m weist die gegenläufige Ausrichtung von Südwest nach Nordost auf.

Das südliche Stadttor mit seinen einst 22,70 m hohen Rundtürmen (Abb. 3) und dem kreisrunden Torhof nach vielleicht messenischem Vorbild¹¹ nimmt nicht nur diese Orientierung auf, sondern befindet sich auch exakt in der Mitte zwischen den Ecktürmen mit einem Abstand

³ Zur Befestigung der Akropolis Martini 2003, 17–41.

⁴ Zuletzt Martini 2010.

⁵ Parallelen für die kastenförmige Anordnung der Mauerschalen und langen Binder sind seit der zweiten Hälfte des 4. Jh. v. Chr. (z. B. aus Alinda) bekannt.

⁶ Zum Flusshafen Martini u. a. 2008.

⁷ Zur Datierung Martini 2003, 37–9.

⁸ Heinle 2009, 45, 60.

⁹ Özdişbay 2012, 212–4.

¹⁰ Mansel 1975, 60–3; vgl. Peschlow 2008, 971–87, bes. 977–9; zum ‚Südtor‘ vgl. Gliwitzky 2010, 63–86, bes. 85.

¹¹ Die Rekonstruktion durch Lauter (1972) konnte durch die Untersuchungen von Selma Bulgurlu bestätigt werden (Bulgurlu 1999).



Abb. 3 Perge. Das Südtor, Ansicht von Süden (W. Martini).

von 540 m. Auch der Knick in dem östlichen Zweig der Stadtmauer mit Beginn der letzten 225 m hängt damit zusammen, dass die Lage des Stadttors offenbar anderweitig fixiert war.¹²

Die Torachse trifft nach Norden exakt den Bereich des Heiligtums der Artemis Pergaia, wo der Tempel unter einer mittelbyzantinischen Basilika zu vermuten ist.¹³ Verlängert man diese Achse nach Süden bis zum Meer, so trifft sie genau den Seehafen Magydos. Den definitiven Beweis, dass hier eine direkte Verbindung zwischen Perge und dem 14 km entfernten Magydos bestand, das seit dem 4. Jh. v. Chr. als Hafen von Perge bezeugt ist,¹⁴ bieten eine 250 m lange, in den anstehenden Fels eingetiefte Schneise für eine Straße und die nördlich angrenzende leicht versetzte Brücke durch eine Senke mit anschließendem Straßenabschnitt.¹⁵ Die ideale Achse

Akropolis – Stadttor – Magydos entspricht nicht ganz exakt dem antiken Straßenverlauf, der bisher nicht eingemessen ist, sondern nur anhand der Satellitenfotos lokalisiert werden kann. Die antike Straße verläuft 330 bzw. 290 m östlich der Ideallinie, wobei die Genauigkeit der Satellitenfotos begrenzt ist, denn auf Aufnahmen von 2005 betrug die Differenz nur 250 bzw. 210 m.¹⁶

Für die umstrittene Datierung der Stadtmauer in das späte 3. Jh. v. Chr.,¹⁷ vor 188 v. Chr.¹⁸ bzw. Ende des 2. oder Anfang des 1. Jh. v. Chr.¹⁹ hilft das einzig erhaltene Triglyphon des dorischen Frieses über dem obersten Turmgeschoss nicht wesentlich weiter, doch ist die frühe Datierung wegen der Abtreppung am oberen Ende der Triglyphe und der fehlenden Ausarbeitung der Ohren, wie sie in der östlichen Ägäis erst im späten 2. Jh. v. Chr. aufkommt,²⁰ auszuschließen. Für ebenso unwahrscheinlich halte ich derart großformatig durchfensterte Turmobergeschosse (Abb. 4) in früh- und hochhellenistischer Zeit.²¹ Ein weiteres Indiz für eine spätere Datierung bietet die Unfertigkeit des Mauerrings. Wie Sondagen im Macellum und westlich der Südthermen ergeben haben, hat es definitiv im Bereich des Macellum nie eine Kurtine²² und westlich nie eine späthellenistische oder frühromische Kurtine gegeben;²³ so merkwürdig das ist, der archäologische Befund ist eindeutig.

Darüber hinaus würde eine gründliche Untersuchung zeigen, dass sich von der ersten Phase der Stadtmauer nur wenige Reste erhalten haben, die überwiegend erst nach einem großen Feuer im Jahr 2003 sichtbar wurden und daher nicht in der 2001 abgeschlossenen Magisterarbeit von Mijde Türkmén²⁴ berücksichtigt werden konnten.

¹² Martini 2008, 781–2; Martini 2010, 16–9.

¹³ Martini 2004.

¹⁴ Martini 2008, 782.

¹⁵ Die Kenntnis von Trasse und Brücke wird gemeinsamen Ausflügen mit Mitarbeitern von Halûk Abbasoğlu und ihm selbst verdankt.

¹⁶ Die Abweichung dürfte durch die besonderen geologischen Gegebenheiten in der Nähe von Perge begründet sein. Etwa 1800 m südlich von Perge weicht die vermutliche Trasse um ca. 130 m östlich von der Ideallinie ab, da dort die fast senkrechte Nordflanke des ca. 64 m hohen Hügels (Çalkaya) aus grobem Kieselkonglomerat der tertiären Flussablagerungen keine Wegführung ermöglichte. In der einzigen natürlichen, rasch ansteigenden Schneise ca. 130 m östlich befindet sich auch heute ein Weg auf das Plateau. Verbindet man diese Schneise mit dem Südtor, entspricht diese Linie exakt der Achse des Südtors und dürfte dessen Ausrichtung bedingt haben.

¹⁷ Ende 3. Jh. v. Chr.: Lawrence 1979, 323; Abbasoğlu 2001, 187.

¹⁸ Zuletzt McNicoll 1997, 130–1.

¹⁹ Mitchell 1992, 16; vgl. zuletzt Özdişbay 2012, 212–4.

²⁰ Martini 1984, 82–3 Tab. D.

²¹ Fenster 0,8 m × 1,6 m; vgl. Anm. 34. Winter 1992, 195–7, 208 errechnet zwar für die Turmobergeschosse die Aufstellung von drei Einheiten aus je einem Fünf-Minen-Steinwerfer und zwei Armbrüsten, doch entspricht dem nicht die Gleichartigkeit der drei zu großen Fenster. Eine funktional schlüssige Lösung bietet dagegen die hellenistische Stadtmauer von Side mit einem mittigen Fenster von ca. 1 m × 1 m und je einer flankierenden Schießscharte.

²² Abbasoğlu mündlich; vgl. Bulgurlu 1999, 4, 36; Bulgurlu-Gün 2008, 233.

²³ Nach Autopsie der von Bulgurlu 1996 durchgeführten Sondage (Bulgurlu 1999, 31–3).

²⁴ Türkmén 2001; zusammenfassend mit zahlreichen Abbildungen publiziert: Türkmén 2008.



Abb. 4 Perge. Turm Md10 an der Ostseite, Ansicht von Nordost (M. Recke).



Abb. 5 Perge. Kurtine Md6 – Md7 an der Südost-Ecke, Ansicht von Südost (M. Recke).

Die heute sichtbaren Kurtinen sind entweder der spätkaiserzeitlichen oder frühbyzantinischen Erneuerung zuzuweisen. Eine Ausnahme bildet die Kurtine zwischen den Türmen Md6 und Md7 an der Südost-Ecke. Auf dem leider schlechten Foto nach dem Brand (Abb. 5) ist zu erkennen, dass die Kurtine in dem unteren Bereich aus bossierten Quadern errichtet ist; über einer leicht vorspringenden Quaderlage folgt dann geglättetes Mauerwerk. Darin ist der Aufbau der Kurtine dem der Türme (Abb. 4) ähnlich,²⁵ von denen einer an der Ostseite ebenfalls erst nach dem Feuer in voller Größe für einige Wochen sichtbar war. Inzwischen ist alles wieder gut 6 m hoch zugewachsen. Diese Kurtine ist bisher die einzige, die der ersten Phase zugeordnet werden könnte, wobei auffällt, dass sie nicht in Turm Md6 einbindet, also eine getrennte Baumaßnahme darstellt.²⁶ Nach den Beschreibungen bei Türkmen und meinen vorläufigen Beobachtungen wurden in der ersten Phase nur wenige Türme und vielleicht die eine erwähnte Kurtine der geplanten Stadtmauer ausgeführt, die in den Plan (Abb. 6) eingetragen sind.

Es ist nicht völlig auszuschließen, dass es mehr gewesen sind, obwohl unverständlich wäre, warum Türme und Mauern der ersten Phase vor der mutmaßlichen

Vollendung der Stadtmauer im Zuge der Angriffe durch Goten, Boraden und Heruler zwischen 255 und 276 zerstört oder abgetragen worden sein sollen.²⁷ Zwar sind in der Stadt Erdbeschäden für hadrianische und severische Zeit nachzuweisen,²⁸ aber es ist angesichts der begrenzten Gebäudeschäden in der Stadt wenig wahrscheinlich, dass diesen Erdbeben große Teile der Stadtmauer zum Opfer gefallen sein könnten.

Aufgrund dieser Indizien und der Tatsache, dass bisher in der Neustadt keine vorkaiserzeitlichen Baureste bekannt sind, erscheint eine Entstehung der Stadtmauer erst nach den mithridatischen Kriegen, vielleicht erst nach 42 v. Chr., als Teile von Pamphylien dem Königreich des Amyntas angeschlossen wurden, möglich. Für die Unterbrechung der Baumaßnahmen könnte die *pax Romana* in Kleinasien ab 25 v. Chr. ein plausibler Anlass gewesen sein,²⁹ doch raten die gegenläufigen Tendenzen in Italien, Dalmatien, Gallien und auf der Iberischen Halbinsel seit augusteischer Zeit zur Vorsicht.³⁰ In Kleinasien hält Anthony W. McNicoll immerhin die Entstehung der Befestigungen von Sillyon und Pednelissos in der Zeit der römischen Provinzialisierung nach 133 v. Chr. für wahrscheinlich.³¹

²⁵ Denkbar ist auch eine Rekonstruktion wie an der Stadtmauer in Side, diese weist an ihrer Außenseite zwei leicht vorspringende Mauerstreifen auf, die die Sohle der Wehrgangsgeschosse an der Innenseite repräsentieren. Die Quader an der Außenseite sind allerdings nicht bossiert; vgl. McNicoll 1997, 143–5 Abb. 67–68; Adam 1982, 40 Abb. 11.

²⁶ Die Zählung der Türme und Kurtinen folgt Türkmen 2001 bzw. Türkmen 2008.

²⁷ Marek 2010, 441–5.

²⁸ Bulgurlu 1999, *passim*.

²⁹ Zur historischen Situation Brandt & Kolb 2005, 20–1; vgl. auch Özdiyab 2012, 214.

³⁰ Gros 1996, 39–52; vgl. Gros 1992, 218–22; vgl. unten S. 8.

³¹ McNicoll 1997, 149 („after 133“ bzw. „period of the Roman protectorate“); Laufer 2010 gelangt hinsichtlich der begrenzten fortifikatorischen Funktion und der Zunahme von architektonischen Schmuckelementen ebenfalls zu einer Datierung „vom fortschreitenden 2. bis in das 1. Jh. v. Chr.“, schließt aber auch eine Datierung in die frühe Kaiserzeit nicht grundsätzlich aus.

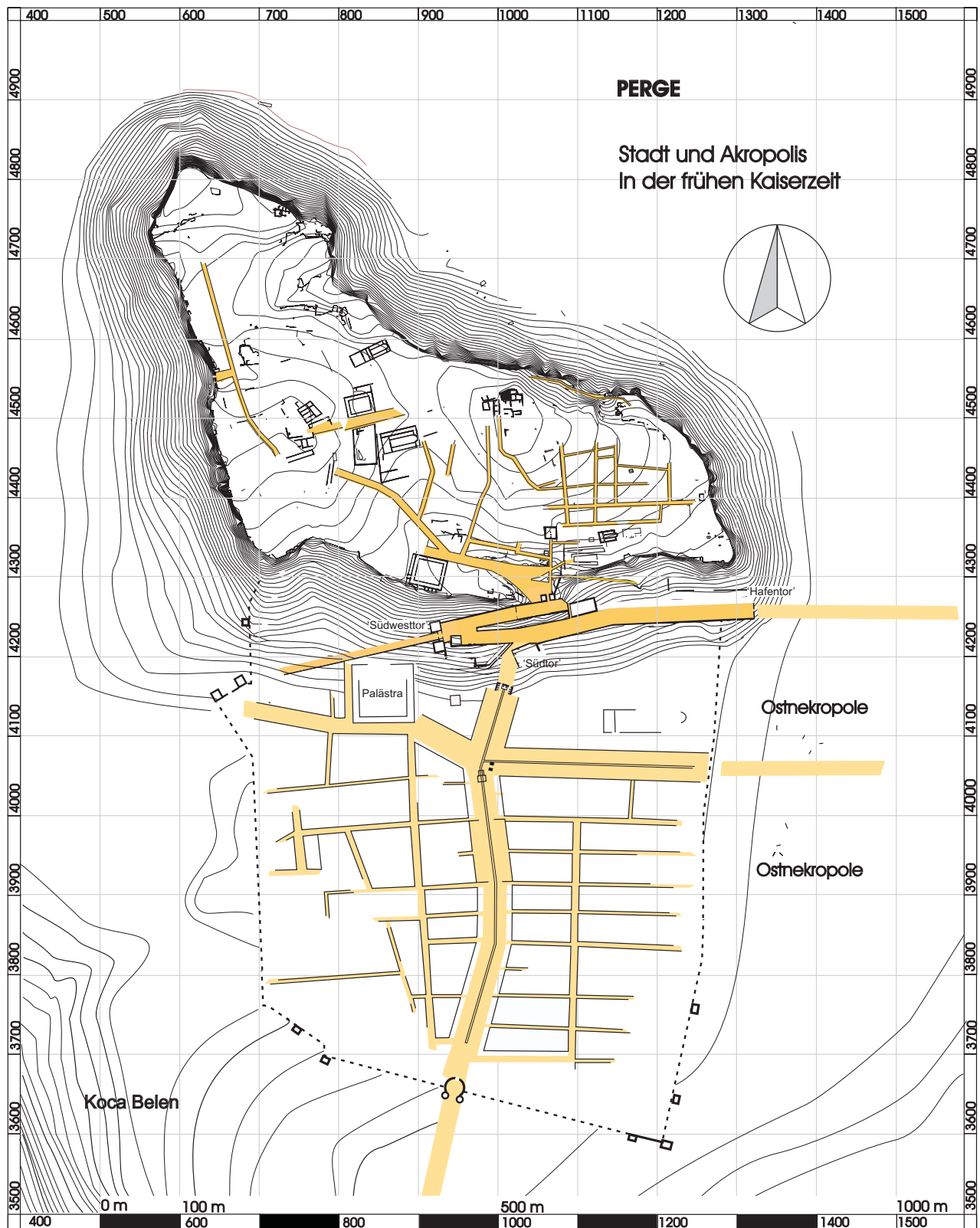


Abb. 6 Perge. Plan der Stadtmauer der ersten Phase (W. Martini).

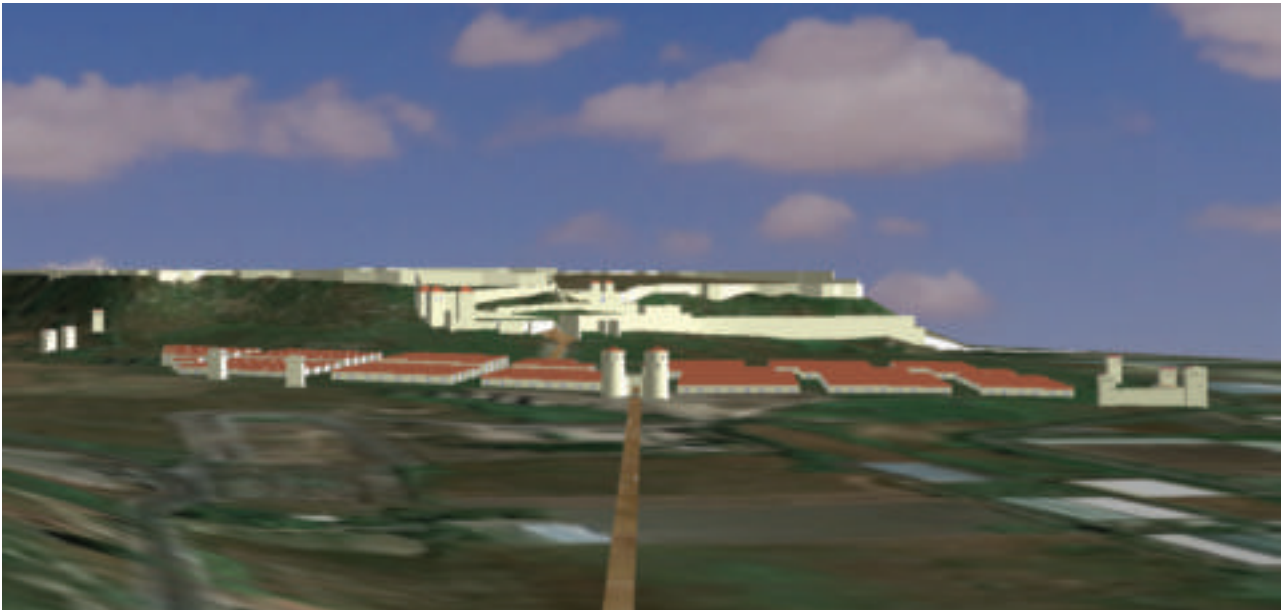


Abb. 7 Perge. Visualisierung der Neustadt in augusteischer Zeit, Ansicht von Süden (H. Ruiperez).

Wichtiger als die noch ungeklärten Probleme der Ausführung der Stadtmauer ist für unsere Fragestellung die Konzeption, die durch die wenigen eindeutig frühen Reste gesichert ist (Abb. 6). Von Interesse ist dabei auch die Ausrichtung der Stadttore auf die Straßen. Während an der Ostseite die hellenistische Situation der geradlinig vom 4 km entfernten Flusshafen ankommenden Straße beibehalten werden konnte, wurde an der Westseite in strategisch problematischer Weise das Tor mit seinen beiden flankierenden Türmen auf die von Nordwesten heranführende Straße ausgerichtet.³² Noch ausgeprägter findet sich diese Ausrichtung an der Südseite der Neustadt, die in voller Breite mit dem mächtigen Südtor und seinen fast 23 m hohen Türmen, den ca. 14 m hohen Zwischentürmen und den etwas massiveren und höheren Ecktürmen in einer gewaltigen Erstreckung von 540 m der Straße vom Seehafen Magydos einen markanten Abschluss bieten sollte. Sobald der Besucher von Perge den letzten Hügel in einer Entfernung von 1,8 km

herabstieg, sollte sich ihm dieser imposante Eindruck eröffnen, der durch den fast weißen Kalkstein der Mauern und Türme noch gesteigert wurde (Abb. 7). Das neue Perge in der Ebene sollte das Bild einer mächtigen und prächtigen Stadt bieten.³³

Dem entspricht auch die Schmuckhaftigkeit der Rundtürme mit der dekorativen Gliederung des obersten Geschosses mit Pilastern, Fenstern, Rundschilden und abschließendem dorischen Fries. Die großen, allenfalls als Einzelfenster für große Katapulte sinnvollen Fenster³⁴ finden sich auch allseitig an den anderen Türmen (Abb. 4) unter den dekorativen Giebfeldern und unterstreichen den festlichen Charakter dieser Architektur, die in ihrem unteren Bereich durch die Bossierung und die schmalen Schießscharten Wehrhaftigkeit, im oberen Bereich hingegen durch die Öffnung und den Dekor eine geradezu einladende Freundlichkeit ausstrahlt.

³² Der unübersichtliche Befund erlaubt bisher zwar keine Aussage über die Datierung der Baureste, doch legt die Konzeption des Tors seine Anlage in der frühen Phase nahe. Eine seltene Parallele bietet das sog. Osttor von Side (Mansel 1978, 54–65 Abb. 52), dessen bisherige Datierung in das 2. Jh. v. Chr. angesichts der Arbeiten von Ute Lohner-Urban, Peter Scherrer und Elisabeth Trinkl (Das Osttor von Side; <<http://zentrum-antike.uni-graz.at/de/forschen/projekte/grabungen-am-osttor-von-side>> [letzter Zugriff am 09.4.2014]) als vorläufig anzusehen ist (s. den Beitrag Ute Lohner-Urban und Peter Scherrer in diesem Band); vgl. Martini 2010, 19–21.

³³ Ähnlich Merida: Trillmich 1990, 302–4; Plan bei Pfanner 1990, 99 Abb. 31. Eine Ansicht der Situation bei Gros 2008, 159 Abb. 11.

³⁴ Die erhaltenen Fensteröffnungen früherer Türme sind deutlich kleiner und in größerem Abstand ausgeführt; zugleich wird auf eine dekorative Ausgestaltung der Fensterzone verzichtet; vgl. z. B. Adam 1982, 48–53 Abb. 73 (Aigosthenai) und 53 Abb. 74 (Messene), 105–10; McNicoll 1997, passim. Eine ähnliche Größe wie in Perge weisen Fenster an den Türmen von Herakleia am Latmos auf (Adam 1982, 239 Abb. 275; McNicoll 1997, 80 Abb. 36), doch handelt es sich teils um Einzelfenster, teils um zwei Öffnungen mit großem Abstand an jeweils einer Turmseite. Auch sind die Türme nach McNicoll 1997, 149 A 152 zu klein für große Artillerie, weil sich Perge keine größeren Türme leisten konnte; angesichts der Befestigung am Südhang ist das kein überzeugendes Argument.

Während die komplexe Befestigung der Akropolis aufgrund ihrer dem Hang angepassten schmucklosen Wehrbauten und mehrerer Zwinger primär durch militärische Zweckmäßigkeit bedingt erscheint und die Wehrhaftigkeit der Oberstadt zum Ausdruck bringt, verdeutlicht die Stadtmauer der Neustadt auch durch die Ausrichtung der Stadttore auf die Straßenachsen und durch die militärisch problematische Lage angesichts des im unteren Hangbereich nur 200 m entfernten, westlich gelegenen Koça Belen, dass andere als militärische Aspekte im Vordergrund standen.³⁵ Gemeinsam blieb den Mauerringen die Abgrenzung gegen das Umland als räumliche wie rechtliche Markierung des städtischen Raums; gewahrt wurde konzeptionell auch die Schutzfunktion, doch in allererster Linie sollte die neue Stadtmauer der sich in die Ebene ausdehnenden Stadt die Macht und den Glanz des neuen Perge sichtbar machen.

Die konzeptuelle Verschiedenartigkeit der Befestigung der Akropolis und der Mauer um die Neustadt an einem Ort, der in vieler Hinsicht erst im Lauf des 1. Jh. n. Chr. durch einen gleitenden Übergang von einer Phase griechischer Prägung zu einer römischen Orientierung gekennzeichnet ist, erscheint eigenartig und wirft die Frage auf, wie dieser geradezu strukturelle Unterschied zu begründen ist.

Als unmittelbare Parallele zu Perge ist wiederholt Teos hinsichtlich seiner geradlinigen Stadtmauern genannt worden,³⁶ wo ähnlich ausgehend von der Akropolis die angrenzende Ebene ohne Rücksicht auf die Topographie rechtwinklig einbezogen wird. Die erneuerte Stadtmauer von Teos kann aufgrund mehrerer Bauinschriften in das späte 3. oder frühe 2. Jh. v. Chr.,³⁷ auf jeden Fall aber in das 2. Jh. v. Chr.³⁸ datiert werden und belegt dieses fortifikatorische Konzept anscheinend bereits in hellenistischer Zeit. Das Mauerwerk bestätigt diese chronologische Einordnung.³⁹ Damit wäre das

pergäische Konzept des orthogonalen Mauerrings bereits in hochhellenistischer Zeit an der kleinasiatischen Westküste realisiert worden. Doch in dem bei McNicoll abgebildeten Gesamtplan von Teos nach Yves Béquignon und Alfred Laumonier,⁴⁰ der der Skizze von George Ewart Bean ähnelt,⁴¹ ist der Verlauf der Stadtmauer offenbar extrem schematisiert. Denn nach den Forschungen von Mustafa Uz und Numan Tuna in den 1990er Jahren in Teos⁴² folgt die Stadtmauer in ihren erhaltenen Abschnitten tatsächlich in der üblichen Weise den topographischen Gegebenheiten.

Des Weiteren scheint die Stadtmauer von Keramos in Karien Perge typologisch ähnlich zu sein, dessen rechteckiger Mauerring gemäß McNicoll ebenso die Akropolis mit einbezieht.⁴³ Die Untersuchungen von Marcello Spanu⁴⁴ bestätigen jedoch weder einen weitgehend geradlinigen Verlauf des Mauerrings noch die ohnehin unwahrscheinliche Zugehörigkeit des polygonalen Mauerwerks und des Quadermauerwerks zu einer Bauphase. Der Stadtmauerring folgt ebenfalls der Topographie und dürfte in Übereinstimmung mit dem polygonalen Mauerwerk nach Spanu im 4. Jh. v. Chr. angelegt und im 2. Jh. v. Chr. in Quadermauerwerk erneuert worden sein. Damit bieten entgegen McNicoll weder Teos noch Keramos eine konzeptionelle Parallele zu Perge, so dass weder chronologische Folgerungen für die Stadtmauer von Perge möglich sind noch sich Hinweise für die ihr zugrunde liegende Gestalt bieten.⁴⁵

Grundsätzlich ist die Ausrichtung der Stadtmauer nach einem orthogonalen Straßensystem ein eher mit dem römischen Mauerbau verknüpftes Phänomen. Die latinische *colonia* von Paestum seit 273 v. Chr.⁴⁶ oder auch weiter im Westen Emporiae (Ampurias) seit dem Ende des 2. Jh. v. Chr. sind Beispiele für diese grundsätzlich von der *Roma quadrata* ausgehende Mauerbaukonzeption, sofern nicht die geomorphologische Situation einen topographisch angepassten Mauerverlauf bedingte.⁴⁷

³⁵ Zu dem Wirkungsbereich antiker Geschütze: Marsden 1969, 87–98. Der westliche Teil der Stadt lag mit einer Entfernung von 400–500 m von dem ca. 65 m höheren Plateau des Koça Belen durchaus im überlieferten Wirkungsbereich größerer Geschütze von 3,5 bis 4 Stadien (Athenaios Mechanikos W 8, 5–9, vgl. Whitehead & Blyth 2004, 46–7).

³⁶ Maier 1959, 221; McNicoll 1997, 157–60.

³⁷ Maier 1959, 216–23; McNicoll 1997, 157.

³⁸ Maier 1959, 221. „Anlässe zur Neubefestigung sind [...] ebenso zu anderem Zeitpunkt [gemeint ist das 2. Jh.] denkbar“.

³⁹ McNicoll 1997, 160 Taf. 70; vgl. <<http://www.teosarkeoloji.com>> (letzter Zugriff am 09.4.2014).

⁴⁰ BCH 49, 1925, 286 Taf. VII.

⁴¹ Bean 1966, 141 Abb. 26.

⁴² <<http://www.tacdarn.metu.edu.tr/node/84>> (letzter Zugriff am 09.4.2014).

⁴³ McNicoll 1997, 160–4 Abb. 37.

⁴⁴ Spanu 1997, 64–91 Taf. 27; engl. Zusammenfassung 197.

⁴⁵ Damit sind auch die Voraussetzungen für viele weitreichende Überlegungen von McNicoll 1997, 148–50 hinfällig.

⁴⁶ Adam 1982, 245–7.

⁴⁷ Gros 1996, 26–52.

Die Stadtmauer der Neustadt von Perge weist allerdings hinsichtlich der auf die Straße von Magydos ausgerichteten Südseite einen signifikanten Unterschied auf, für den mir keine Parallele bekannt ist. Auch die generelle Ausrichtung der Stadttore auf die ankommenden Hauptstraßen ist ein sehr seltenes Phänomen, das mir zweifelsfrei nur von dem Osttor von Side bekannt ist, das das Vorbild für das Westtor von Perge geboten haben könnte.⁴⁸ Das Fehlen griechisch-hellenistischer Vorbilder und die konzeptionelle Beziehung zum römisch-republikanischen Festungsbau legen meines Erachtens nahe, auch eine Entstehung der Stadtmauer der Neustadt von Perge unter Augustus ab 25 v. Chr. zu erwägen. Denn auch nach der Romanisierung der Provinzen im Osten und Westen und nach Beginn der *pax Romana* blieb die Stadtmauer als Grenze zwischen dem Drinnen und dem Draußen, zwischen *urbs* und *ager*, zwischen Lebenden und Toten mit all ihren religiösen, rechtlichen und wirtschaftlichen Aspekten von konstitutiver Bedeutung für eine Stadt.⁴⁹

Analog zu inschriftlich dokumentierten Gewährungen der Stadtmauer durch Augustus wie z. B. der *colonia Iulia Nemausus* (Nîmes)⁵⁰ ist ein entsprechender Vorgang auch in Perge denkbar. Als Indiz dafür könnte auf die mutmaßliche Panzerstatue von Augustus in Perge (Abb. 8) hingewiesen werden, deren Bildprogramm mit Herakles gegen den Kentauren Nessos über der niedergeworfenen Dianeira offenkundig die Errettung der Stadt durch den Kaiser als *pater patriae* oder Koloniegründer feiert.⁵¹

Da bisher für die Neustadt weder ein Bauwerk, nicht einmal eine Spolie, noch eine entsprechende Inschrift aus der Zeit vor Tiberius sicher nachweisbar ist,⁵² halte ich es für denkbar, dass die Stadtmauer trotz ihres hellenistischen Mauerstils erst augusteisch ist.⁵³ Dem widerspricht auch nicht die ‚Unfertigkeit‘, denn im umbrischen Carsula und ligurischen Augusta Bagiennorum fehlen ebenso die Kurtinen. In der frühen Kaiserzeit genügte es, die *dignitas* der Stadt allein durch die Tore zum Ausdruck



Abb. 8 Antalya, Museum. Panzerstatue des Augustus (?) (W. Martini).

zu bringen.⁵⁴ Nicht die Befestigung der Stadt gegen äußere Feinde war mehr notwendig, vielmehr dienten die Stadtmauer oder ihre repräsentativen Bestandteile wie Turm und Tor, die den städtischen Raum durch eine repräsentative Fassade nach außen und innen kennzeichneten, der Selbstvergewisserung einer zwar gegenüber dem Kaiser loyalen, zugleich jedoch sich als autonom empfindenden Bürgerschaft. Inwieweit die Mauer „Symbol der Wehrhaftigkeit, der vom Princeps wiederhergestellten *virtus*“ war⁵⁵ oder im traditionellen Selbstverständnis der befestigten hellenistischen Städte verankert war, wie dies die Bürgerschaft von Perge vielleicht empfand, sind offene Fragen, die

⁴⁸ s. Anm. 32. Ähnlich ist auch die Situation des ‚Heiligen Tors‘ in Milet aus der zweiten Hälfte des 2. Jh.v. Chr.

⁴⁹ Gros 1996, 26–7; Hölscher 1999, 67–73; Martini 2010, 15–6.

⁵⁰ Gros 1996, 219; Horster 2001, 58 (Liste augusteischer Stadtmauerstiftungen im Westen), 121–33.

⁵¹ Laube 2006, 9–16, 199–204 (zur Deutung).

⁵² Şahin 1999, 1–22; die allgemeine Lokalisierung der Inschriften (Nr. 1–10 und 14–18) in Perge bietet keine Hinweise, dass die Ehrenbeschlüsse und Grabinschriften sich auf die Neustadt beziehen könnten. Die Weihungen bzw. Ehrungen im Artemis-Pergaia-Heiligtum waren trotz ihrer Auffindung im unteren Stadtgebiet aufgrund der Lage des Heiligtums auf der Akropolis dort aufgestellt; s. Anm. 4. Dagegen setzen erst in tiberischer Zeit Bauinschriften in der Unterstadt ein, die eine rege Bautätigkeit signalisieren (Şahin 1999, 23–4); vgl. auch Özdiybay 2012, 321–2.

⁵³ Ich bin mir des spekulativen Charakters dieser Überlegungen durchaus bewusst und möchte sie als Anregung verstehen, bei den archäologischen Arbeiten in Perge künftig auch diese Fragenkomplexe miteinzubeziehen.

⁵⁴ Pfanner 1990, 88; Gros 1996, 221.

⁵⁵ Zanker 1987, 323–4.

mangels augusteischer Zeugnisse ebenso wenig wie der als Romanisierung bezeichnete lokale Prozess des Kulturwandels⁵⁶ mit Beginn der augusteischen Befriedung und Herrschaft beurteilt werden können.⁵⁷ So ist z.B. der Kaiserkult mit pentetaerischen Kaiser-Agonen in Perge inschriftlich erst ab vespasianischer Zeit belegt.⁵⁸ Doch legen der städtebauliche Aufschwung seit Tiberius und die Annahme römischer Namen im Lauf des 1. Jh. n. Chr.⁵⁹ sowohl eine wirtschaftliche Blüte als auch die Akzeptanz der römischen Herrschaft durch die Elite und damit auch eine identitätsstiftende Funktion der Stadtbefestigung nahe.

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⁵⁶ Woolf 1998, bes. 238–46.

⁵⁷ Vgl. Pilhofer 2006, 14–6 mit weiterer Literatur.

⁵⁸ Şahin 1999, 55–60 Nr. 42–5.

⁵⁹ Şahin 1999, 23–32.

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HELLENISTISCHE PRUNKTORE – EIN WISSENSCHAFTLICHER IRRTUM? VORLÄUFIGE GRABUNGSERGEBNISSE VOM OSTTOR VON SIDE AUS DER KAMPAGNE 2012

Ute Lohner-Urban & Peter Scherrer

Zusammenfassung

Das Institut für Archäologie der Universität Graz führte auf Einladung der Universität Eskişehir im Sommer 2011 eine Reinigungskampagne und 2012 Ausgrabungen am Osttor von Side in der Türkei durch. Das in den 1960er Jahren entdeckte und teilweise ausgegrabene Tor gilt traditionell in der Forschung als hochhellenistische Anlage. Die Tiefgrabung in der Kampagne 2012 zeigte, dass es zwar einen hellenistischen Vorgängerbau gibt, zu dem eine schräg verlaufende Mauer unter der südlichen Torhofmauer gehört. Aber die heute wieder vom Dünen sand großteils befreite und somit erstmals für die moderne Forschung präparierte Hofanlage mit den seitlichen Tordurchgängen und den beiden Türmen wurde im 1. Jh. v. Chr. errichtet. Vom 2./3. Jh. bis zum 7. Jh. n. Chr. wurden mehrfach Änderungen an den Toren durchgeführt, indem sie etwa mit neuen Gewölben ausgestattet bzw. diese dann wieder weitgehend zugemauert wurden. Eine Sonderstellung nimmt das Obergeschoss des Tores mit einem spätantiken Mosaikboden ein. Die ursprüngliche Anbringung und Zeitstellung eines Waffenfrieses am Tor bleibt vorläufig ungeklärt.

Diese noch nicht endgültigen Erkenntnisse der neuen Forschungen stellen die schon früher in Zweifel gezogene These der Existenz hellenistischer Prunkttore fundamental in Frage. Vielmehr darf heute eine fast linear verlaufende Entwicklung dieser Toranlagen von vorne offenen rechteckigen oder ovalen hellenistischen Höfen mit flankierenden Türmen oder ohne und einem einzigen Tor in der stadtseitigen Hofmauer bis zum Einbau eines Tores zwischen den Türmen mit zwei oder drei Durchgängen konstatiert werden. Erst dadurch wurden die in der wissenschaftlichen Literatur immer wieder hervorgehobene Fernwirkung und der prunkvolle Gesamteindruck auf Kosten der militärischen Funktionalität erzielt.

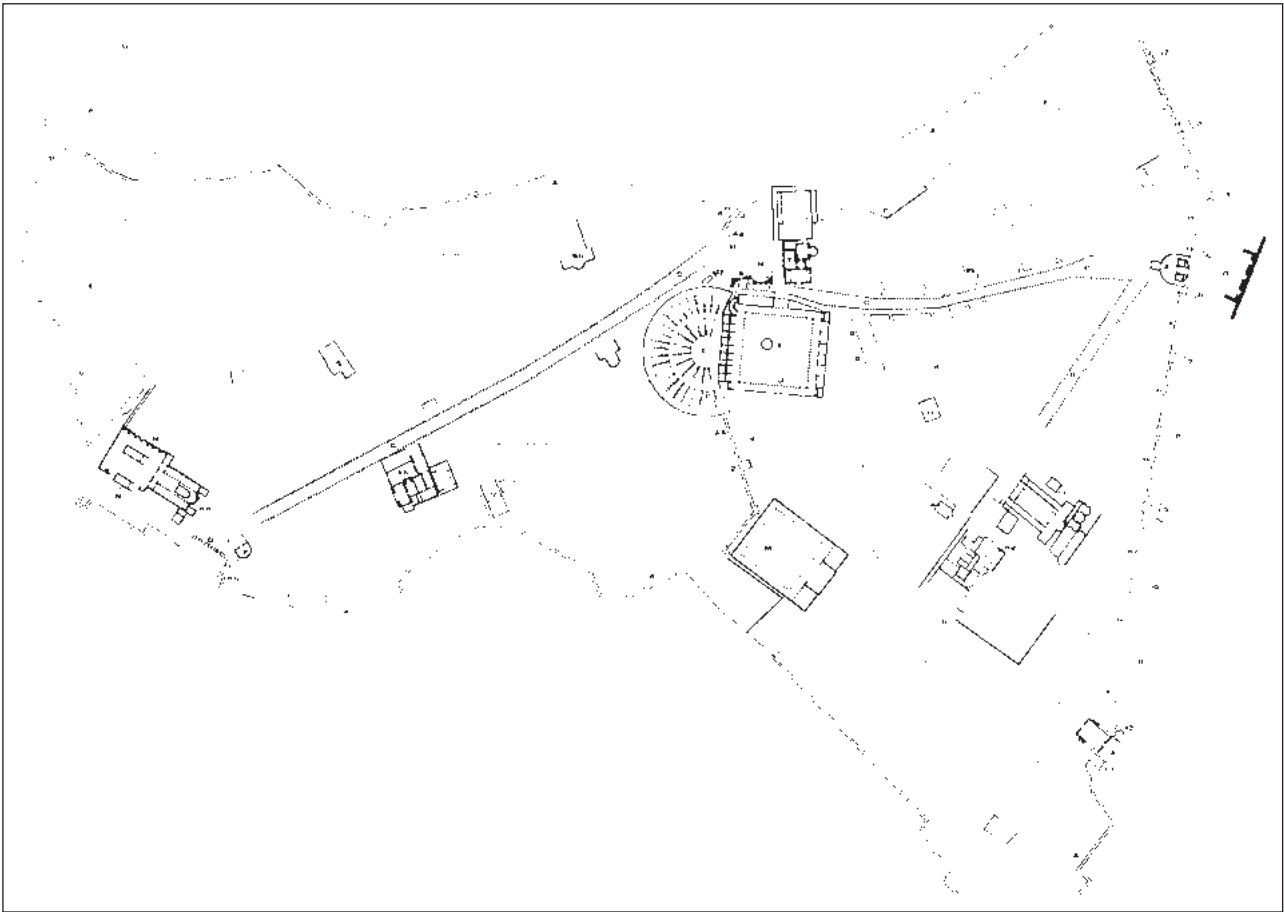


Abb. 1 Der Stadtplan von Side (nach Mansel 1978).

Durch ein Kooperationsprojekt mit der Anadolu Üniversitesi Eskişehir unter der Grabungsleitung von Hüseyin Sabri Alanyalı und dem Institut für Archäologie der Universität Graz werden seit 2011 archäologische Forschungsarbeiten in Side in der heutigen Provinz Antalya in der Türkei durchgeführt. Entsprechend dem Schwerpunktthema des Instituts für Archäologie „Stadtmauern und Urbanisierung“ wurden archäologische Untersuchungen am östlichen Stadttor von Side begonnen.

Die Befestigungsmauer von Side ist mit den beiden Toren, dem sog. Haupttor und dem Osttor, eines der besterhaltenen Monumente der antiken Stadt (Abb. 1). Während von der Seemauer nicht mehr viel zu sehen ist, ist die Landmauer noch sehr gut erhalten. Es handelt

sich um eine dreigeschossige Kasemattenmauer, bei der im obersten Geschoss anstatt einer Zinnenbrüstung eine mit Fenstern versehene Wand errichtet war. Dieses Merkmal wird stets als Begründung für eine hellenistische Datierung der Landmauer angeführt.¹ Das „Haupttor“ der Stadt wurde 1949 von Arif Müfid Mansel vollkommen freigelegt.² Charakteristisch für dieses Tor ist der halbrunde Hinterhof, weshalb es mit den Stadttoren von Perge und Sillyon verglichen wird (Abb. 7b, c). Seine erste Errichtungsphase wird zeitgleich mit der Landmauer in späthellenistische Zeit gesetzt.

Diesem durchdachten Befestigungssystem gehört auch das Osttor von Side an, das nach der bisherigen Forschungsmeinung³ ebenfalls als hellenistisch bezeichnet und in das 3.–2. Jh. v. Chr. datiert wird.⁴

¹ Mansel 1968, 238–9.

² Mansel 1956, 34–120; zuletzt Gliwitzky 2010, 123–31.

³ Winter 1971, 191 Anm. 104; McNicoll 1997, 147–8; Nollé 1993, 8; Gliwitzky 2010, 123–31.

⁴ Nach Nollé 1993, 67 ist eine Datierung des Osttores in die letzten Jahrzehnte des 3. Jh. v. Chr. wahrscheinlich.



Abb. 2 Side-Ansicht des Osttores von Südosten (Universität Graz).

Obwohl die Befestigungsanlage und viele Gebäude der antiken Stadt bereits lange bekannt waren,⁵ wurde das Osttor, das vollkommen mit Dünen sand bedeckt war, erst 1964 von Mansel entdeckt und bis 1966 teilweise ausgegraben.⁶

Die Anlage befindet sich in einer ausgedehnten Küstensanddüne, die sich außerhalb des Tores über weite Strecken zieht (Abb. 2). Das Osttor war zu Beginn der Kampagne im Sommer 2011 wieder vollständig mit Sand verfüllt und mit Sträuchern verwachsen. In einer ersten Säuberungs-Kampagne war es zunächst notwendig, mithilfe von Baggern den Sand bis zu dem von Mansel 1966 ausgegrabenen Niveau zu entfernen. Die gesamte Umgebung des Tores liegt unter bis zu 10 m hohen Sanddünen, weshalb die topographische Einordnung des Tores in die umliegenden baulichen Strukturen unklar ist. Karl Lanckoroński⁷ erfasste in seinem Plan bereits den zur Toranlage gehörenden Turm 11 (Abb. 3) sowie eine Straße vom antiken Stadtzentrum in Richtung Osttor (Abb. 1). Zu dieser Straße bemerkte bereits Mansel: „Auf der Nordseite dieses Gebäudes [Anm.: Kaiserhalle] führte eine 7 m breite Straße höchstwahrscheinlich zu einem östlichen Tor der Stadtmauer“.⁸ Fragmente von

Säulentrommeln und Säulenbasen sowie Mauerreste entlang dieser Verbindung lassen auf eine Säulenstraße vom Tor stadteinwärts zum sog. Gebäude mit dem Kaisersaal schließen.⁹ Stadtauswärts wird eine weitläufige Nekropole vermutet, die ebenfalls unter den Sanddünen liegt, wie auch der Weiterverlauf der Stadtmauer vom Osttor nach Norden.¹⁰ Aufgrund der aus dem Sand ragenden Türme ist die Fortsetzung jedoch zu erahnen.

Die Toranlage umfasst eine Fläche von ca. 30 m × 20 m und besteht wie die Stadtmauer aus Blöcken aus dunkelgrauem, grobkörnigem Konglomerat, in ihrem heutigen Zustand gibt es teilweise vermörtelte und mit Ziegelstücken oder kleineren Steinen ausgebesserte Fugen. Das eigentliche Tor (Abb. 2, 3) besteht aus zwei mit Keilsteintonnen überwölbten Torgewölben (A und C), zwischen denen sich ein ursprünglich zugangsloser Raum (Raum B) befindet. Die beiden Durchgänge messen je ca. 6,70 m in der Breite und 8,80 m in der Tiefe. Sie waren beide außen sekundär mit einer ca. 1 m starken Füllmauer weitgehend verschlossen. Im Tordurchgang C ist diese Sperrmauer noch gut erhalten. Über der 2,30 m breiten und 4,90 m hohen Freilassung für eine Tür befindet sich am Sturz in der Mitte ein kleines Christogramm.¹¹

⁵ Lanckoroński 1890, 125–52.

⁶ Mansel 1968, 239–79.

⁷ Lanckoroński 1890, 124.

⁸ Mansel 1963, 22–3.

⁹ Mansel 1963, 109–21. Der Grabungsleiter Hüseyin Sabri Alanyalı vermutet, dass dieses Gebäude ein Teil der nach Süden anschließenden Therme ist.

¹⁰ Mansel 1963, 173–94.

¹¹ Mansel 1968, 245 Abb. 7.



Abb. 3 Side. Grundrissplan des Osttores (H. Maier, Universität Graz).

Über der Toranlage breitet sich eine Terrasse von 22 m Länge und 8,7 m Breite aus, auf der Mansel elf Platten eines Waffenfrieses sowie einen Inschriftenstein in sidetischer Schrift und Sprache fand.¹² Diese Terrasse wird von einer ca. 0,90 m breiten Mauer umgeben, die aus zwei hintereinander gesetzten Orthostaten-Reihen besteht, wodurch für den Betrachter des Tores

der Eindruck einer Attika als Torabschluss entsteht. Auf dieser Terrasse war ein Mosaikfußboden verlegt worden, der aufgrund stilistischer Merkmale frühestens in die Spätantike datiert werden kann und zumindest für diese Zeit einen geschlossenen Raum im Oberstock voraussetzt.¹³ Im Norden und Süden führten von dort aus Türen zu den anschließenden Wehrgängen.

¹² Mansel 1968 268–79. Der Inschriftenstein in sidetischer Schrift und Sprache befindet sich im Archäologischen Museum Side und wurde im Sommer 2013 von Christian Zinko und Michaela Zinko (Zentrum Antike, Universität Graz) bearbeitet.

¹³ Mansel 1968, 243–4, 247 Abb. 10. Mansel (1968, 243) datiert das Mosaik in byzantinische Zeit.

Das Tor wird an der Landseite auf beiden Seiten von zwei Türmen flankiert. Vom südlichen Turm 11 sind die Ost- und Südseite mit einer Breite von 11,80 m und einer Tiefe von 12 m in der letzten Bauphase noch bis zu 11 m hoch erhalten. Der nördlich gelegene Turm 12 mit einer Breite von 10,40 m und einer Tiefe von 11,50 m ist wesentlich stärker zerstört.

Der viereckige innere Torhof besitzt eine Breite von 18,50 m und eine Tiefe von ca. 17 m. Die Stärke der Nord- und Südmauer beträgt jeweils ca. 0,75 m, während die westliche, also rückwärtige Hofmauer ca. 1,20 m breit ist. An der nördlichen und südlichen Mauer sind außen Steintreppen angelegt, die auf die Wehrgänge und die Terrasse über dem stadtseitigen Gewölbeteil der seitlichen Tore E und F führten.

Der Hof weist drei weitere Tore (E, F und Westtor) auf, über die man in das Stadttinnere gelangte. Das Westtor ist in der Hoflängsachse 3,55 m breit. Die Mauern auf beiden Seiten des Tores sind zum Torhof hin mit pilasterartigen Vorsprüngen von 1,15 m Breite versehen.

Die zwei seitlichen Tore (E und F) verfügen über eine Breite von 3,60 m und eine Tiefe von 3,80 m. Ihre gut erhaltenen Tonnengewölbe aus hellem, feinkörnigem Kalkstein ruhen auf Eckpilastern, auf denen einfache geschwungene Kapitelle sitzen. Die beiden Tore E und F wurden wie das Haupttor zu einem noch nicht genau bekannten Zeitpunkt zugemauert.

An der Innenseite der südlichen Hofmauer befindet sich in situ im Anschluss an den Tordurchgang A noch ein kleiner Rest eines dorischen Gebälks aus hellem, feinkörnigem Konglomeratgestein.¹⁴

Die Ergebnisse der Ausgrabungskampagne 2012

Entlang der südlichen Hofmauer, den beiden Pfeilern und der Sperrmauer von Tor F sowie der südlichen Torwand von Tor A wurde eine ca. 9 m (Ost-West) × 6 m (Nord-Süd) große Sondage (sog. Fläche 1) angelegt (Abb. 3, 4). Ziel war es, die stratigraphische Abfolge an dieser wichtigen Stelle, wo das Tor A, das Tor F und die Hofmauer zusammentreffen, zu erfassen und eventuelle frühere bauliche Strukturen zu erkennen. Ausgangspunkt war das Endniveau der von Mansel durchgeführten Ausgrabung in den 1960er Jahren. Mansel gibt zwar eine sehr genaue Beschreibung des Osttores, liefert darin aber sehr wenig Informationen über seine durchgeführten archäologischen Untersuchungen. So beschreibt er nur kurz einen Fußboden in den Tordurchgängen aus gestampfter Erde, der das Ausgangsniveau unserer Ausgrabungen darstellte.¹⁵

In der untersten sandigen Schicht (SE 39), die wegen des Grundwassers nicht bis zum Ende verfolgt werden konnte, wurde hellenistische Keramik gefunden, die



Abb. 4 Side. Ansicht des Osttores von Nordwesten: südliche Hofmauer, Tor F, Tor A und Fläche 1 (Universität Graz).

¹⁴ Mansel 1968, 254 Abb. 22; 257 Abb. 28. Zahlreiche Architravsteine, Reste eines Triglyphenfrieses und Teile eines ionischen Gesimses wurden verstreut im Hof und westlich von diesem im Sand gefunden, sie wurden noch nicht bearbeitet.

¹⁵ Aufgrund der knappen Angaben über seine Ausgrabungen in den 1960er Jahren war es auch nicht weiter erstaunlich, dass sich innerhalb der ausgesteckten Grabungsfläche an der südlichen Wand von Tor A und der Sperrmauer von Tor F eine ca. 4 m × 1,50 m große Sondage fand, die mit Sand verfüllt war. Diese Sondage, die wohl auf die archäologischen Aktivitäten Mansels zurückzuführen sein wird, wurde bis annähernd zur Mitte der Sperrmauer in Tor F, dem östlichen Pfeiler von Tor F sowie einem kurzen anschließenden Teil der südlichen Wand von Tor A angelegt. Insgesamt wurden die Kulturschichten von Mansel ca. 1,20 m tief weggenommen, wobei er nicht bis zum anstehenden Boden vorgedrungen war.

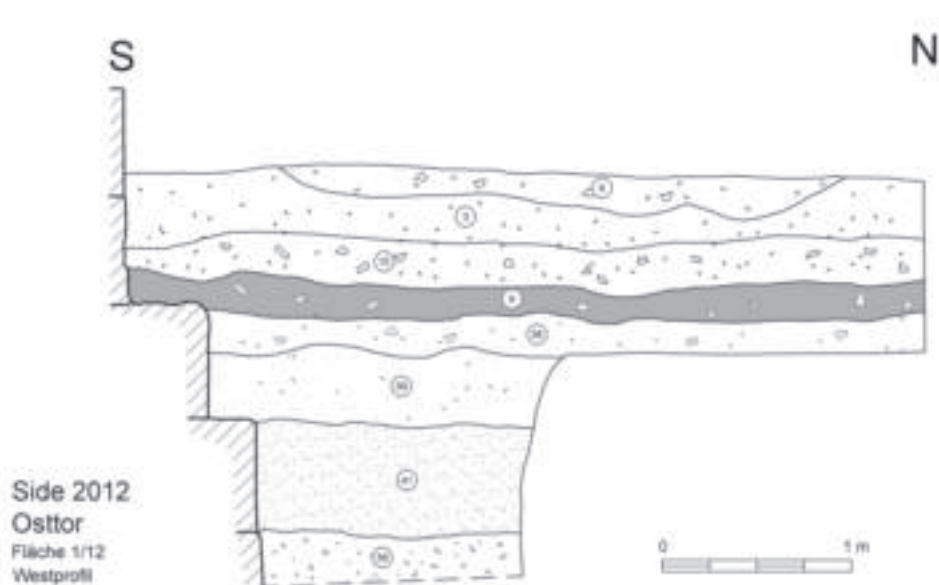


Abb. 5 Side. Westprofil, Fläche 1/12 (H. Maier, Universität Graz).

in das 2. Jh. v. Chr. zu datieren ist (Abb. 5). Neben zahlreichen Wandscherben aus gelblich-beigem Ton wurden innenbemalte Schälchen aufgedeckt, die der Hellenistic Colour-Coated Ware zuzurechnen sind, wie sie in Paphos auf Zypern vorkommen.¹⁶ Diese unterste sandige Schicht (SE 39) schließt mit einer Mauer ab, die unter die gesamte Toranlage leicht schräg verläuft (Abb. 6). Von dieser Mauer konnten bisher drei Mauerscharen ausgegraben werden.¹⁷ Sie besteht hauptsächlich aus grob- bis mittelkörnigen Konglomeratblöcken (ca. 0,70 m lang und 0,60 m breit). Dazwischen befinden sich aber immer wieder größere Blöcke mit einer Länge von 1,90 m, was im Vergleich zu den Mauern im Torhof ein unregelmäßiges Erscheinungsbild wiedergibt. Über diesem sandigen Stratum (SE 39) folgt eine mit Schotter und Sand durchsetzte Schicht (SE 41), in der sich Eastern Sigillata A sowie frühe Formen der Sigillata Cipriota fanden, die in das 1. Jh. v. Chr. zu datieren sind. Auf diese Schicht folgen eine dunkelgraubraune Erdschicht (SE 38) mit Sigillata Cipriota der Form X59 aus dem 1.–2. Jh. n. Chr. sowie eine Schicht (SE 36) mit Münzen aus dem 2.–3. Jh. n. Chr. und mit Sagalassos Red Slip Ware der Form 1B162/1 und 1B170.¹⁸ Diese Schicht reicht exakt bis an die Oberkante des treppenartigen Vorsprungs der südlichen Hofmauer.



Abb. 6 Side. Fläche 1 mit schräg verlaufender Mauer (Universität Graz).

¹⁶ Hayes 1991, 26–7 Abb. 14. Nach Auskunft des Grabungsleiters Hüseyin Sabri Alanyalı und des Fundbearbeiters Alptekin Oransay wurden diese innenbemalten Schälchen auch bei Ausgrabungen im Dionysos-Tempel in Side im Jahr 2011 in einem Kontext gefunden, der ebenfalls der späthellenistischen Periode zugerechnet werden kann.

¹⁷ Wegen des steigenden Grundwassers war es gegen Ende der Kampagne im Sommer 2012 nicht mehr möglich, an dieser Stelle weitere Ausgrabungen durchzuführen.

¹⁸ Poblome 1999, 306. Die Münzbestimmung führte Ahmet Tolga Tek, Anadolu Üniversitesi Eskişehir.

Darüber folgt im westlichen Teil der Grabungsfläche eine Lehmschicht mit viel Ziegelbruch und Holzkohle, die nach Osten hin lehmiger wird. In dieser Schicht ist eine Grube für eine Kanalleitung aus Tonrohren eingetieft. An Keramik kamen hier hauptsächlich Late Roman D Ware der frühen Form 2 sowie zahlreiche Münzen aus dem 4. Jh. n. Chr. zutage (SE 9). Darüber befand sich eine weitere massive Schuttlage mit vielen Ziegelfragmenten, Marmorplattenbruch, Moasiksteinchen, Late Roman D Ware sowie Münzen aus dem 4. Jh. n. Chr. In den obersten Schichten fanden sich Münzen aus dem 6. Jh. n. Chr. sowie späte Late Roman D Ware.¹⁹

Außer der leicht schräg verlaufenden untersten Mauer, die aufgrund der stratigraphischen Abfolge und des damit in Zusammenhang zu bringenden Fundmaterials als frühestens späthellenistisch zu bezeichnen ist, konnten in dieser Kampagne keine weiteren phasengleichen Strukturen festgestellt werden. Die früheste Keramik aus der untersten Sandschicht (SE 39) gibt mit dem 2. Jh. v. Chr. einen Terminus ante quem²⁰ für eine erste Toranlage vor (Abb. 5), falls eine solche mit der schräg verlaufenden Mauer in Verbindung zu bringen ist. Nach den bisherigen Ergebnissen wurden der Torhof, das Tor F bis zum östlichen Pfeiler sowie der untere Teil von Tor A im 1. Jh. v. Chr. auf diese Mauer gesetzt, wobei vorläufig offenbleibt, ob es sich um eine eigene Bauphase handelt oder um die Fundamentierung des aufgehenden Torhofes. Wie die massiven Schuttschichten aus dem 4. Jh. n. Chr. zeigen, sollte das Niveau in der Anlage erhöht werden. Damit werden auch Umbauarbeiten an den Torgewölben in Zusammenhang zu bringen sein. Einen Hinweis dafür liefert auch eine ca. 1,20 m breite grubenartige Vertiefung, die ausschließlich mit Konglomeratabschlag verfüllt war und als Baugrube für Umbauarbeiten am Torgewölbe A gedeutet werden kann. Unmittelbar darüber befand sich außerdem ein Gehniveau, das aufgrund des Fundmaterials in das 4. Jh. n. Chr. datiert werden kann. Das Mauerwerk in den Gewölben von Tor A und C zeigt gegenüber dem sehr regelmäßigen Aufbau des Torhofes einen uneinheitlicheren Charakter. Neben vereinzelt bossierten Steinen, die vermutlich von der früheren Toranlage stammen, kommen auch

sehr unterschiedlich lang gearbeitete Steinblöcke vor. Spätere Ausbesserungen an der Torwand, die durch den brüchigen Konglomeratstein notwendig wurden, weisen Ziegelstücke auf.

Nach diesem Befund ist davon auszugehen, dass große Teile vom sichtbaren, bisher als hellenistisch bezeichneten Osttor frühestens im 1. Jh. v. Chr. errichtet wurden. Dazu sind der gesamte Torhof mit dem westlichen Ausgang sowie die unteren Teile (Pfeiler) der Tore E und F zu zählen. Einiges spricht dafür, dass die (vermutliche) erste Toranlage vollkommen abgeräumt wurde. Hinweise darauf liefern Versatzmarken auf einigen Architektursteinen und bossierte Steine, die in den Wänden von Tor A und C verbaut wurden.

Das bekannte aus einer Landmauer, einer Seemauer, dem Haupttor und dem Osttor bestehende Befestigungswerk wird gesamt als hellenistische Anlage bezeichnet.²¹ Als Begründung führt Mansel an: „Wenn wir nun zur Datierung der sidetischen Stadtmauer übergehen, so muß betont werden, daß keine Inschrift vorhanden ist, die uns sichere Auskunft hätte geben können. Daß aber hier an Stelle der Zinnen im obersten Geschoß eine mit Fenstern versehene Wand getreten ist, weist auf hellenistische Zeit. Die sorgfältige Bauart der Mauer, die Berücksichtigung ästhetischer Gesichtspunkte (z. B. die Gurtgesimse an der Außenfassade) deuten darauf, daß diese Mauer in einer Zeit entstanden ist, die m. E. der Periode zwischen 188 und 102 v. Chr. entsprochen haben muß, einer Zeit also, während der die Stadt vollkommen autonom gewesen ist, alle Vorteile eines langen Friedens genoß und sich eines gediegenen Wohlstandes erfreute.“²² Nach Johannes Nollé besteht aufgrund des Inschriftensteins in sidetischer Schrift und Sprache des Waffenfrieses durchaus die Möglichkeit, dass das sog. hellenistische Tor bereits im 3. Jh. v. Chr. errichtet wurde.²³ Beide gehen folglich davon aus, dass der Inschriftenstein und der Waffenfries von der ersten Anlage des Osttores stammen. Die Steine wurden von Mansel 1966 auf der Terrasse über den überwölbten Durchgängen gefunden.²⁴ Sie lagen allerdings über dem Mosaikfußboden, der frühestens in die Spätantike zu datieren ist. Damit ist

¹⁹ Aufgrund von vorläufigen bauhistorischen Beobachtungen am Tor und Streufunden ist davon auszugehen, dass die Anlage bis in das 7. Jh. n. Chr. mehrmals umgestaltet wurde: zuletzt dazu Peschlow 2010, 83–5. In der Grabungskampagne im Sommer 2012 wurde ein digitaler steingerechter Grundrissplan der Toranlage erstellt. Eine digitale Aufnahme der Maueransichten wurde im Sommer 2013 durchgeführt. Die endgültige Auswertung des bauhistorischen Befundes steht noch aus.

²⁰ Für die untersten Mauerblöcke konnte kein Fundamentgraben festgestellt werden (Abb. 5).

²¹ Zuletzt Gliwitzky 2010, 123.

²² Mansel, 1963, 38–9.

²³ Nollé 1993, 67.

²⁴ Mansel 1968, 247 Abb. 10.

aber nicht sicher zu belegen, dass die Waffenreliefs bzw. der Inschriftenstein ursprünglich vom Tor stammen, sie können somit nicht als Begründung für eine Datierung in hellenistische Zeit herangezogen werden.

Folgerungen der Grabungserkenntnisse für die Frage hellenistischer Prunktore

Wie oben festgehalten schlug Mansel in mehreren Schriften für die Stadtmauer (Abb. 1) – und in Konsequenz

auch für das antik als Μεγάλη Πύλη bezeichnete, mit einem ovalen Hof ausgestattete Haupttor²⁵ (Abb. 7b) sowie das Osttor (Abb. 7a) – eine Datierung des Ursprungsbaues in das 2. Jh. v. Chr., genauer die Zeit der Unabhängigkeit zwischen 188 und 102, vor.²⁶ Als Parallelen für den Hoftortypus nannte schon Mansel Tore u. a. in Perge (Abb. 7c), Priene, Assos, Pergamon, Athen (Dipylon und Heiliges Tor), Korinth (Isthmisches Tor), Mantinea, Stymphalos, Messene und Stratos sowie Tyndaris in Italien.²⁷

Ute Schwertheim fasste vor Kurzem zusammen, dass vorne offene Hoftore mit flankierenden Türmen seit dem

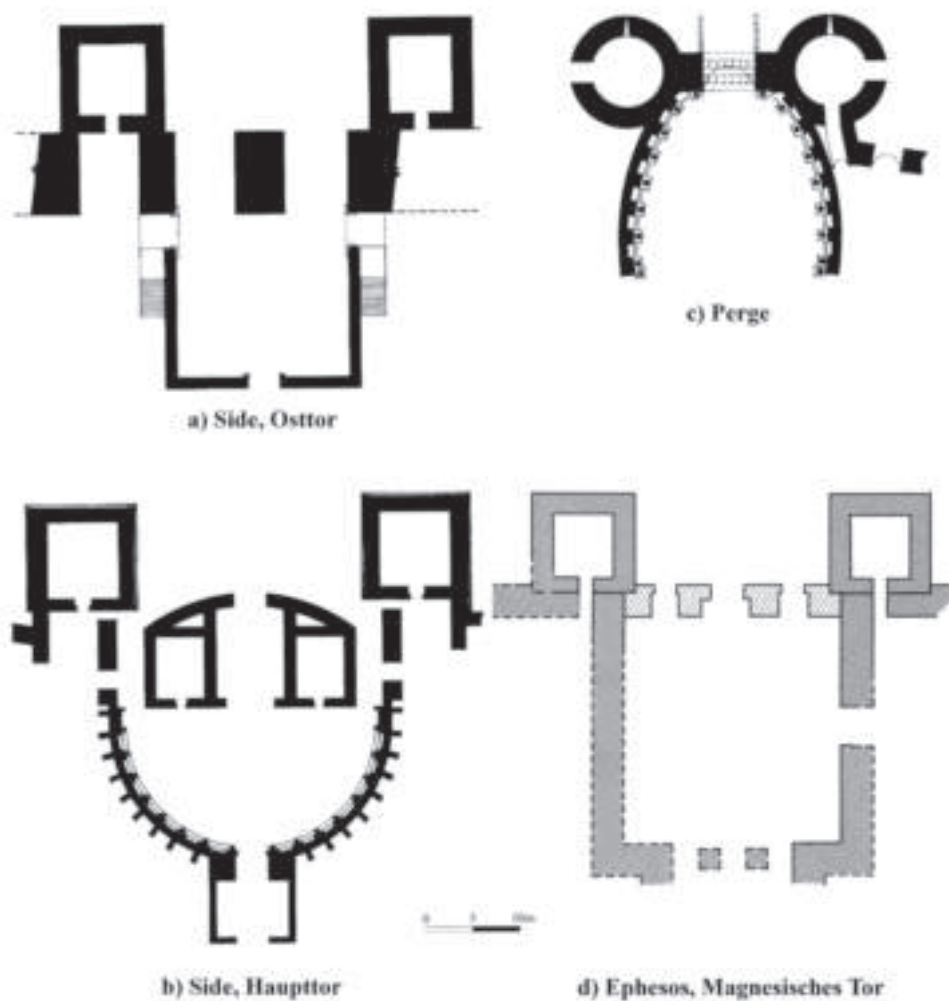


Abb. 7 a–c: Grundrisse von Toranlagen in Side und Perge; d: Ephesos, Magnesisches Tor. a–c: nach McNicoll 1997, 154 Abb. 35; d: nach Scherrer 2006, Abb. 6.

²⁵ Nollé 2001, 398–407 Nr. 105. Die Inschrift nennt konkret die Bewohner eines Stadtviertels *Megalopyleitai*.

²⁶ Vgl. etwa Mansel 1963, 36–9; Mansel 1978, 47–54 (Beschreibung Haupttor), 54–65 (Beschreibung Osttor), 66 (Datierung, ohne die Bauphasen in der Grundrissgestaltung zu unterscheiden).

²⁷ Mansel 1963, 38; Mansel 1978, 66.

5. Jh. v. Chr. gut belegt (Dipylon-Tor, Themistokleische Bauphase um 478; Stratos und Isthmisches Tor in Korinth, beide zweite Hälfte des 5. Jh. v. Chr.) und im 4. Jh. (Myndos-Tor in Halikarnassos, nach 370; Tore in Messene, Epaminondas-Zeit ab 369; Stadttor in Athen bei der Pnyx, Ende 4. Jh. v. Chr.; Dipylontor, hellenistische Phase um 307 v. Chr.) weiterhin häufig seien, wobei „es spätestens im Verlauf des 3. Jh. v. Chr. üblich wird, Hoftore beidseitig zu schließen und sie so in Binnenhoftore zu verwandeln, die bei Bedarf als Zwinger zu nutzen sind“.²⁸ Dabei beruft sich Schwertheim einerseits auf die *Communis Opinio* der zusammenfassenden Literatur mit Frederick E. Winter²⁹ und Gunnar Brands,³⁰ andererseits darauf, dass in das Pnyx-Tor in Athen „am Ende des 3. Jhs. v. Chr. ein feldseitiger Verschluss eingebaut wurde“.³¹ Abgesehen von der Tatsache, dass keines der genannten Tore tatsächlich aus sich heraus mittels penibler, stratigraphisch geführter Ausgrabungen datiert werden konnte und sich somit die zeitlichen Einordnungen neben bautechnischen Details vor allem auf historische Ereignisse stützen,³² muss aber wohl viel stärker als bisher zwischen dem vorne offenen oder geschlossenen, ovalen oder rechteckigen Hoftor als grundlegenden Varianten eines seit dem 5. Jh. v. Chr. verbreiteten Bautypus einerseits und dem ‚Prunktor‘ mit dem mehrtorigen feldseitigen Abschluss und Träger einer besonderen Ausstattung (Fassaden mit aufwendiger Architektur, Reliefbänder, figurale Rundskulpturen) unterschieden werden.

Die komplette Neudatierung der heute erkennbaren Substanz des Osttores von Side vom 3./2. Jh. v. Chr. in am ehesten augusteische und severische Zeit³³ mit substantiellen spätantik-byzantinischen Veränderungen wirft im Verein mit ähnlichen Ergebnissen jüngster Grabungen und Bauuntersuchungen am – in den oben genannten verallgemeinernden Untersuchungen nicht berücksichtigten – Magnesischen Tor in Ephesos die Frage nach der prinzipiellen Haltbarkeit bisheriger Thesen zu Prunktoren bzw. „Toren als der ‚Visitenkarte‘ der Städte“ auf, wie dies etwa von Hans Lauter in seinem Handbuch zur hellenistischen Architektur formuliert³⁴ und seither in der Forschung, wie die genannten Beispiele Schwertheim und Urs Peschlow deutlich zeigen, weitgehend kritiklos antizipiert wurde.

Die bereits angesprochene Weiterbildung der historischen Entwicklungskette mit vorne geschlossenen Hoftoren durch Schwertheim „spätestens im Verlauf des 3. Jhs. v. Chr.“ stützt sich im Wesentlichen auf einen singulären Befund, das Pnyx-Tor, der als sekundäre Umbaumaßnahme alle möglichen Gründe (die Annahme von Notmaßnahmen in der Diadochenzeit bedarf keiner ausführlichen Begründung) haben kann, aber keinesfalls eine zwingende architekturtheoretische Neuerung darstellen muss. Im Gegenteil zeigt das Magnesische Tor der frühestens ab 294, eher ab 287 v. Chr. begonnenen Stadtbefestigung der lysimachischen Arsinoeia, wie Ephesos kurzfristig genannt werden sollte, noch ganz

²⁸ Schwertheim 2010, 100, 102.

²⁹ Winter 1971, 225–6. Er ist sich aber keineswegs sicher über die Faktenlage, wenn er zu den äußeren Toren (eines zweiten, inneren Torhofs übrigens) etwa relativiert: „at least in late Hellenistic work“ und „there is some room for doubt“ (225) oder: „Thus it seems that the open-fronted court preceded rather than followed the closed plan“ (226).

³⁰ Brands 1988, 17 („[...] älteste Beispiele, die [...] im frühen 3. Jh. entstanden [...]“) und 25–6. Dieser scheinbaren Sicherheit der Datierung von Binnenhoftoren in Italien steht aber einiges entgegen, u. a. dass die meisten Tore von Alba Fucens, auch die Porta Fullonica, nur sehr rudimentär untersucht wurden und heute wieder zugeschüttet sind. Starke Widersprüche ergeben sich im Text bei der Datierung der Porta Fullonica, die nach ihm (Brands 1988, 82–5) einerseits der originalen Mauerbauphase des 3. Jh. v. Chr. zuzurechnen ist, andererseits aber (Brands 1988, 84) „eine im 1. Jh. durch einen Rechteckurm veränderte Variante darstellt“. Abgesehen davon, dass sich die Fallgitterspuren am feldseitigen Torausgang nicht aus sich selbst heraus datieren lassen, ist schon die Art der 4,10 m breiten Torgasse dieses Seitentores von Alba Fucens nicht mit hellenistischen Torhöfen von mindestens 10 m bis über 20 m Breite zu vergleichen. In Cosa (Brands 1988, 114–7) ist die Sachlage noch diffiziler, da hier neben einem inneren Torhof (mit ein oder zwei Verschlüssen?) ein von Flankentürmen verschmälterter äußerer Torhof feldseitig nur von einem Fallgitter (Brands 1988, 116) verschlossen wurde, ein richtiges Tor ist hier wie in den anderen frühen Toren mit feldseitigem Verschluss in Italien (vgl. Brands 1988, 20) gar nicht vorhanden gewesen. Erst die spätere republikanischen Binnenhoftore des 1. Jh. v. Chr. (Brands 1988, 21–5) weisen mit bis zu drei (oder in der Kaiserzeit sogar vier) Durchgängen an der Feldseite und einer entsprechenden Monumentalisierung der Torbauten (vgl. etwa auch Albintimilium/Ventimiglia, Brands 1988, 87–90) die hier interessierenden Merkmale von Prunktoren auf.

³¹ Zum Tor an der Pnyx vgl. Thompson & Scranton 1943, bes. 333 (Datierung der Errichtung), 352 (Sperre feldseitig) und 360 (Datierung der Sperre).

³² Vgl. z. B. die durchaus mit sehr guten Argumenten arbeitende Diskussion um die Datierung der Stadtmauer und -tore von Messene in die Zeit des Epaminondas bei Müth 2010, bes. 81–3.

³³ Damit erklären sich auch die etwa von Peschlow 2010, 82–4 formulierten Bedenken der strategischen Schwächen des Osttores; er meinte, dass die Tore unverschießbar und nicht zu verteidigen gewesen wären; außerdem konnte der Feind im Innenhof des Osttores nicht bekämpft werden, da auf den einreihigen Hofmauern kein Platz für einen Wehrgang war. Er schloss daher unter ausdrücklicher Bezugnahme auf Lauter 1986, 73–4, auf eine „übliche“, repräsentative hellenistische Toranlage. „Sicherung und Feindabwehr gehörten offensichtlich nicht zum Konzept der Anlage“.

³⁴ Lauter 1986, 73–4.

klar die Konzeption des vorne offenen Hoftores mit flankierenden Türmen und einem wahrscheinlich dreitorigen Eingang in der stadtseitigen Hofmauer (Abb. 7d).³⁵ Damit schließt sich das Magnesische Tor direkt dem Grundriss etwa des Südtores von Messene (Grundfläche 16 m × 17 m) an, besitzt aber mit einem Hof von 26,5 m × 23 m mehr als die doppelte Größe. Im Gegensatz zu den oben genannten Anlagen mit einem oder zwei Durchgängen dürfte bei dem ephesischen Tor der aufgrund einer ausgegrabenen Torwange mit 12,60 m Breite zu berechnende Durchlass als Tripylon ausgestaltet gewesen sein, wie dies auch in Halikarnassos schon bald nach 370 für die Stadtmauer des Mausolos mit dem Tripylon oder Myndos-Tor (verfügbare Breite zwischen den Türmen 13 m) gesichert ist.³⁶ Anscheinend wurde im mittleren 2. Jh. v. Chr.³⁷ ein vorne offener, von Türmen flankierter Torhof errichtet, der im Laufe des 1. Jh. v. Chr.,³⁸ wohl aber eher erst in augusteisch-tiberischer Zeit³⁹ durch ein neues äußeres Tor mit drei Durchgängen geschlossen wurde. Zu einer solchen, spätestens frühkaiserzeitlichen Datierung könnten die im Torbereich gefundenen Reste dorischer Architektur und eines Waffenfrieses⁴⁰ genauso passen wie zu einer möglicherweise viel früheren Phase, was genauso auch für das Osttor von Side zutrifft.⁴¹ Hier wäre in beiden Fällen eine von historischen Vorurteilen befreite antiquarische Untersuchung der dargestellten Details der Waffen zur Objektivierung der Datierungen vorzunehmen.⁴²

Das Osttor von Side und auch das Magnesische Tor von Ephesos, wenn dessen Datierung als ursprünglich offenes

Hoftor mit flankierenden Fronttürmen durch Alexander Sokolicek in das spätere 2. oder frühere 1. Jh. v. Chr. zutreffen sollte,⁴³ stärken die bereits von Brands für Italien generierte These, dass die symmetrischen Flankentürme allgemein erst in das 1. Jh. v. Chr. gehören und damit die über die ursprünglichen feldseitigen Fallgitter hinaus reichenden echten zwei- oder dreitürigen Toreinbauten zwischen diesen Türmen erst eine Entwicklung des mittleren 1. Jh. v. Chr. seien.⁴⁴ Ja, man könnte daraus sogar – bis zu einer allfälligen Falsifizierung durch gut stratifizierte Ausgrabungen – als Arbeitshypothese ableiten, dass erst römischer Einfluss diese Art der prunkvoll in das Land hinaus wirkenden Binnenhoftore auch im griechischen Raum geschaffen hat.⁴⁵ „Geprägt wird das Erscheinungsbild der Binnenhoftore des 1. Jhs. [ergänze: v. Chr.] von monumentalen Bauten, deren Gestaltungsweise in der älteren Tradition keine Vorstufen hat und nicht unmittelbar aus ihr erklärt werden kann.“⁴⁶

Sinngemäß gilt dies auch für zwei weitere pamphyliche Prunktore (angeblich) hellenistischen Ursprungs, die erst viel später ihre endgültige prunkvolle Gestaltung erhielten. Das Haupttor von Side (Abb. 7b) hat anscheinend erst durch das Vorziehen der Torsituation in die Vorderfront mittels zweier viertelkreisförmiger Bastionen und die prunkvolle Fassadenausstattung des elliptischen Hofes in severischer Zeit seine lange für genuin hochhellenistisch gehaltene Gestalt erhalten.⁴⁷ Christian Gliwitsky unterscheidet neuerdings drei Bauphasen: erstens den hellenistischen Kernbau, gemeinsam mit der Stadtmauer, der vorne – zwischen den

³⁵ Scherrer 2006, 67–8; zu neuesten Ausgrabungen, die die „frühhellenistische“, genauer lysimachische Datierung des Stadtmauerbaues, allerdings ohne ein hier nachweisbares Tor bestätigten, vgl. Sokolicek 2009b, 337–8 und 344 sowie Abb. 20; Sokolicek 2010, 366 und 377–8.

³⁶ Pedersen 2000, 306–8, 311 Abb. 5: Grundriss (nicht archäologisch datiert!); vgl. auch Schwertheim 2010, 102.

³⁷ Sokolicek 2010, 378–9.

³⁸ Sokolicek 2010, 367 und 379. Sokolicek 2009a datierte zuerst nach seinen Fundamentsondagen den Umbau „in späthellenistischer Zeit“ bzw. „um 100 v. Chr.“ (Bildlegende zum Phasenplan) aufgrund des Fehlens jüngerer Funde. Die Kleinheit der Sondagen lässt hier jedoch allenfalls einen prekären Schluss *e silentio* zu. Sokolicek 2009b, 334 mit Anm. 49 stellt hingegen fest, dass sich die Datierung für den zwischen den Türmen eingebauten „späthellenistischen Eingang in den Torhof [...] nicht aus stratigraphischen Grabungen, sondern aus technischen Überlegungen der Bauabfolge“ ergäbe. Dazu führte er aus (Sokolicek 2009b, 337): „In der weiteren Folge kann man aus den übereinstimmenden Höhenrelationen darauf schließen, dass der Bau des Südtores und die Errichtung der Pfeiler gleichzeitig gegen Ende des 2. Jahrhunderts v. Chr. oder kurze Zeit später erfolgten“.

³⁹ Scherrer 2006, 67–8.

⁴⁰ Seiterle 1982, 147–8 (Reliefs und Skulpturen); vgl. dazu und zu den Architekturblöcken auch Scherrer 2006, 64–5.

⁴¹ Vgl. Mansel 1968.

⁴² Ein seltenes Beispiel für eine in situ erhaltene Anbringung eines sog. Waffenfrieses oberhalb eines Stadttors ist mit den Schildreliefs von Perugia/Perugia in der Zeit um 100 v. Chr. (Brands 1988, 164–7; abweichend davon jetzt Coarelli 2006, 80–5 mit Abb. 3–4: mittleres 3. Jh. v. Chr.) gegeben.

⁴³ Vgl. oben Anm. 37 und 38.

⁴⁴ Brands 1988, 22–5. Vgl. etwa die Porta Venere in Hisspellum, einer *colonia* des 2. Triumvirats, die frühestens um 40 v. Chr. oder frühaugusteisch als geschlossener Hof mit flankierenden Türmen und zwei dreibogigen Toren errichtet wurde (Brands 1988, 132–3.).

⁴⁵ Damit bewahrheitet sich die damals ‚ketzerisch‘ wirkende Behauptung von Brands 1988, 28, der meinte, das Osttor von Side sei „zu einem Vergleich mit den römischen Binnenhoftoren besonders geeignet [...]“. Das Aussehen des feldseitigen Traktes könnte überhaupt dazu verleiten, den Torbau für römisch zu halten“.

⁴⁶ Brands 1988, 26–7.

⁴⁷ Bereits Lauter 1972, 10 vermutete, dass die halbrunde Bastion zwischen den Fronttürmen, die ein dreiteiliges feldseitiges Tor entstehen ließ, erst aus römischer Zeit stamme.

Tortürmen – auf voller Breite offen war;⁴⁸ zweitens die Errichtung der gerundeten Bastion mit Mitteldurchgang im vorderen Abschnitt;⁴⁹ drittens die spätseverische Prunkfassade im Hofinneren.⁵⁰ Als Vorbild für diese Ausstattung des sidetischen Haupttors fungierte wohl der Umbau des ebenfalls ursprünglich feldseitig offenen, im Kern vielleicht früh- oder hochhellenistischen Haupttores von Perge (Abb. 7c) durch Plancia Magna in der Regierungszeit Hadrians.⁵¹ An beiden Toren wären die Flankentürme bzw. die tatsächliche Entstehungszeit des gesamten Bauwerks nur stratigraphisch zu datieren.

Erst die weitere feldarchäologische und bauhistorische Erforschung und ausführliche Neupublikation der hier angesprochenen Tore in Ephesos, Perge, Side und anderer Torbauten wird nähere Gewissheit in der Frage nach der tatsächlichen Entstehungszeit der ‚Prunktore‘ Kleinasien (und anderer antiker Landschaften) erbringen können bzw. zeigen, ob hier überhaupt ein hellenistisches Motiv vorliegt oder eine spätestrepublikanisch-frühkaiserzeitliche Erfindung des 1. Jh. v. Chr. Damit ist auch einmal mehr eine Lanze dafür zu brechen, chronologische und typologische Reihen stets aufs Neue zu hinterfragen und durch aktuelle nach *state of the art* durchgeführte Ausgrabungen und Bauuntersuchungen zu ergänzen und zu korrelieren.

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⁴⁸ Gliwitzky 2010, 124.

⁴⁹ Gliwitzky 2010, 124–5. („römisch“ ohne näheren Datierungsvorschlag).

⁵⁰ Gliwitzky 2010, 125–31.

⁵¹ Vgl. dazu den Beitrag von Wolfram Martini in diesem Band. Die Entstehung des Torhofs in seiner jetzigen Form und des feldseitigen Tores zwischen den Rundtürmen im „früheren 2. Jahrhundert n. Chr.“ wurde bereits von Lauter 1972, 8 herausgestellt.

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THE FUNCTION AND SIGNIFICANCE OF FORTIFIED SANCTUARY PRECINCTS IN THE EASTERN MEDITERRANEAN WORLD DURING THE HELLENISTIC AND ROMAN PERIODS

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Abstract

The fortress-like walls and towers of the holy districts are a characteristic peculiarity of the Hellenistic and Roman sanctuaries in the eastern Mediterranean. Their massive form and elaborate construction technique raise the question what purpose the fortifications had for the cult practice in the sanctuaries. The walls clearly demarcate the holy district from the surrounding territory. The solid construction technique of the ashlar masonry, which is bossed on the exterior similar to fortification towers and furnished with chisel drafts, emphasizes the defensive function of the fortification. Goods were deposited in the courtyards, towers and temples and had to be protected from theft and robbery. In the night all entrances to the sanctuary were locked up. Large sanctuaries, such as the temple in Jerusalem, had a great number of treasuries, the *thesauroi*, and depositories at their disposal. The monumental crypts in the platform of the temples were particularly well suited as storehouses. Typically they could only be entered from within the district and were accessed through corridors. The towers of the district walls also had a religious function. Steps in their interior led up to a platform where ritual celebrations such as processions and sacrifices took place. The fortification-like appearance of the district walls could also carry semantic meaning. Examples for this can be seen in the temple complexes of the city goddess of Seeia and the city goddess of Kanatha in southern Syria where the massive *temenos* walls with their towers resemble city walls.

Introduction

In the Eastern Mediterranean numerous sanctuaries from the Hellenistic and Roman periods are characterized by fortress-like walls protecting their precincts.¹ These walls are not simply precinct walls but breastworks which, like

town walls, have curtain walls and towers. The elaborate construction raises the question of the sacral function and significance of these fortress walls. To answer this question, we must understand the way in which the walls were built and equipped in view of their use and purpose for the various tasks at the sanctuaries, particularly for the

¹ For compilation of these sanctuaries see Freyberger *et al.* (in print).

cult and commercial aspects. Additionally, the structural facilities and the equipment of the precincts must be taken into consideration.² From an analysis of their functions it is possible to identify everyday activities and behaviour at the sanctuaries. The study presented here focuses on a selection of significant sanctuaries whose architectural remains provide telling information for the project.

Cultic function of the fortress walls

The precinct walls of sacral sites separate the precinct from its surroundings, thus defining the separated area as a *templum* or a sacred place. In view of this function, the walls may be of different designs and size. If the wall has huge curtain walls and towers like a fortress, a wall of this kind cannot be exclusively meant for separation.

THE SANCTUARY OF IUPPITER DAMASCENUS IN DAMASCUS

A striking example of this is the sanctuary of Iuppiter Damascenus in Damascus. The shape and structure of its precinct walls indicate several aspects of cult use. This sacral site is located immediately south of the Barada and is situated in the north-western part of the ancient city. Here, parts of the rectangular network of streets as well as their *insulae* have been preserved.³ The whole complex consists of two concentrically organized courts. If the outer court of 385 m × 305 m served as a market precinct, the inner court of 150 m × 100 m served as the *temenos*, the original location of the temple building (Fig. 1).⁴ The foundations of the completely levelled sacred building are probably below the current level of the court of the Umayyad Mosque. Beyond the northern and western parts of the outer surrounding wall are two

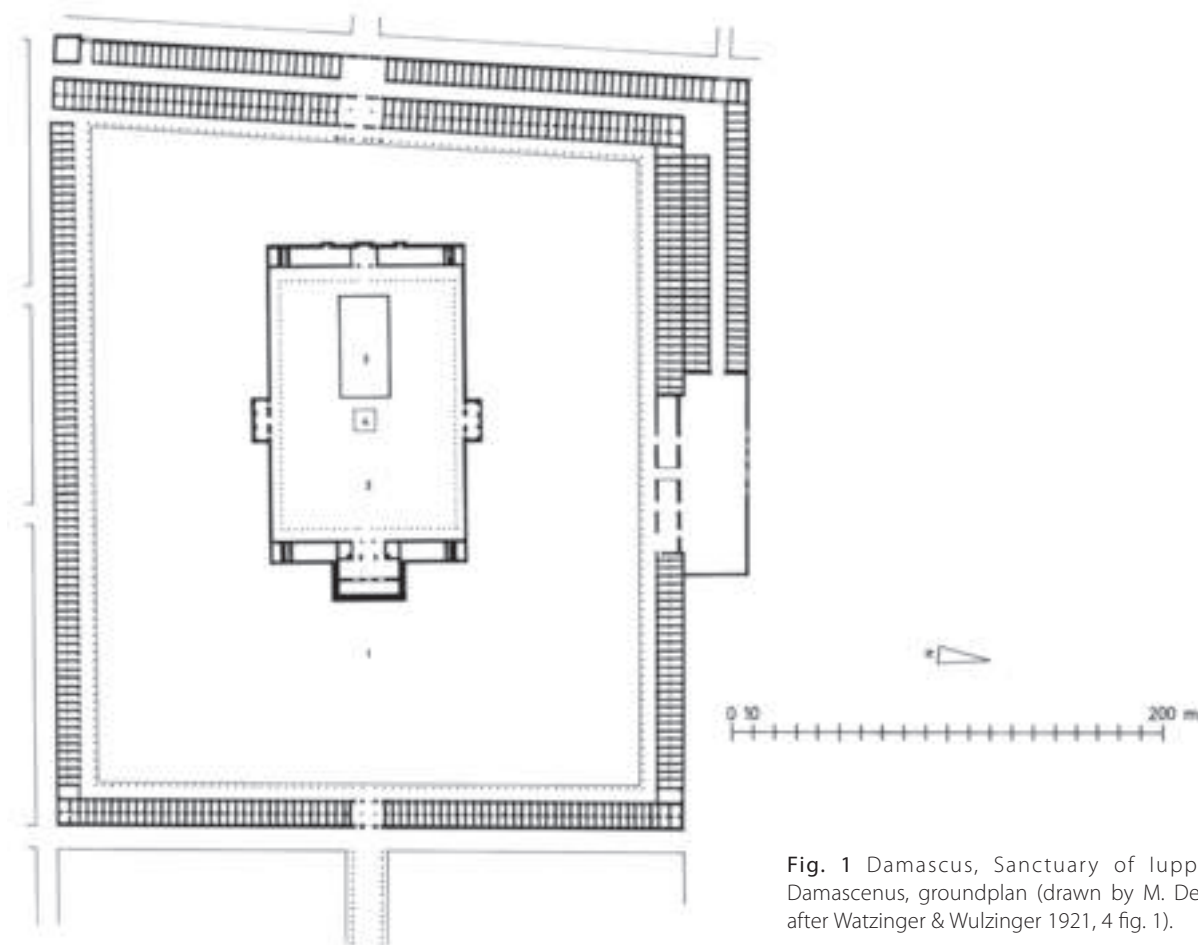


Fig. 1 Damascus, Sanctuary of Iuppiter Damascenus, groundplan (drawn by M. Deshti after Watzinger & Wulzinger 1921, 4 fig. 1).

² On the function of sanctuary courtyards in the Eastern Mediterranean world see Dentzer 1989a, 309–20.

³ Sauvaget 1949, 356, fig. 15; Weber 1993, 147, fig. 2.

⁴ Watzinger & Wulzinger 1921, 4, fig. 1; Sauvaget 1949, 316, fig. 1.



Fig 2 Damascus, Sanctuary of Iuppiter Damascenus, tower at the south-western corner (K.S. Freyberger).

other walls that form a Gamma and are thus called the Gamma precinct. The sanctuary of Iuppiter Damascenus is the largest known ancient cult site in Syria. The dimensions of the outer court are only exceeded by the contemporary sacred building of the Shamash sanctuary at Hatra and Herodes' Temple in Jerusalem.⁵ According to the preserved building inscriptions, the date refers to the Seleucid Age. The entire site was planned in the 1st century BC and constructed in the following years.⁶ In the Severan period the sanctuary was extensively rebuilt. Indications for this are provided by the architectural decorations of the building which, according to the stylistic rendering of the shapes, were added in the late 2nd century AD.⁷

Towers stood at the four corners of the inner wall, which not only gave the precinct the impression of a fortress but were also functionally connected to the temple cult (Fig. 2). Flights of stairs in the interior led to intermediate storeys and to a platform where ritual ceremonies took place. The assumption that sacred rites were carried out on the towers and the roofs of the temple buildings is confirmed by written testimonies from ancient authors as well as by the religious installations within the sanctuaries: according to the lavishly built stairwells, they did not simply serve as access for maintaining and cleaning the roofs but had to fulfil clearly defined functions in the context of processions and other ritual ceremonies. Stairways inside the towers gave worshippers access to a rooftop where incense offerings and libations as well as other ritual ceremonies took place. In this context it is probable that certain flights of stairs, like in the case of the temple of Bel at Palmyra, were accessible only via the adyton. The entrance to the holiest of the holy, i.e. the seat of the god, was an exclusive right of the highest-ranking religious dignitaries. If a sanctuary such as that of Damascus was furnished with several stairwells and towers, they could have been used for various purposes in the context of ceremonies and also by members of the religious community who held different ranks. Almost all sanctuaries in the Eastern Mediterranean world were furnished with stairwells and rooftops, an old tradition which can be traced back to ancient Mesopotamian religious architecture.⁸ Almost contemporary examples which can be compared to the towered temenos wall of the sacred building in Damascus are the Temple of Herodes in Jerusalem as well as the sanctuaries of Kanatha and Seeia in Southern Syria.⁹

THE MONASTERY SITE OF SAKKAIA ('ED DEIR')

Sakkaia, today the Syrian village of Shaqqa, is located in the fertile Safa region in the Hauran.¹⁰ According to epigraphic evidence this place was originally a village in Antiquity.¹¹ During the rule of Emperor Diocletian, Sakkaia was granted city status, under the name of Maximianopolis,¹² while at the same time holding the status of a colony.¹³ At the western and eastern ends of the c. 360 m long modern main street, following the course of

⁵ Freyberger 1998, Beilage (Appendix) 38.

⁶ Seyrig 1950, 34–7; Freyberger 1989, 64–6.

⁷ Freyberger 1989, 85–6.

⁸ Frankfort 1969, 52, 55, 69, figs 19–20, 25–6; Freyberger 1998, 112–13.

⁹ Freyberger 2004a, 268.

¹⁰ Rindfleisch 1898, 22.

¹¹ Waddington 1870, no. 2136.

¹² Jones 1937, 286–7.

¹³ Waddington 1870, no. 2139.



Fig. 3 Sakkaia, geodetic plan, religious and administrative buildings (surveyed and produced by K. Schnädelbach, TUM-München).



Fig. 4 Sakkaia, 'Ed-Deir', western façade (P. Grunwald).

the ancient street, two huge building complexes, 'Ed-Deir' in the east and 'Kaisarye' in the west, face each other (Fig. 3). Both sites were originally pagan sanctuaries which in late Antiquity were changed into monasteries and were once again converted in the Islamic period.

The building in the eastern part, called 'Ed-Deir', is used as a farm today.¹⁴ Two monumental towers are included in its western front; its ashlar masonry with finely chiselled edges suggests that the sanctuary was built in the late Hellenistic period (Fig. 4). Ashlars of the same shape are found at the turrets of the precinct walls of the temple of the Tyche of Kanatha which must be dated to about the mid-1st century BC.¹⁵ The towers were most likely part of a monumental propylon which served as the entrance to the temenos of a sanctuary.¹⁶ The high ennobling towers at the entrance front not only had stairs for the guards but also stairwells. It is probable that the wide rooftops of the towers on which ritual ceremonies took place were

similar to those on the towers of the precinct walls of the main sanctuary of Damascus.

THE SANCTUARY OF GAREUS OF URUK (WARKA)

The temenos wall of the Sanctuary of Gareus at Uruk looked like a fortress.¹⁷ According to an honorary decree from the sanctuary, the temple was consecrated as late as AD 111,¹⁸ however the site looks back onto a long tradition with several older building periods.¹⁹ The temenos wall had three-quarter circular towers at the corners and probably semi-circular towers on each side (Fig. 5). In Schmidt's opinion they served decorative purposes instead of any concrete function.²⁰ However, given their monumentality we may rather imagine that some of

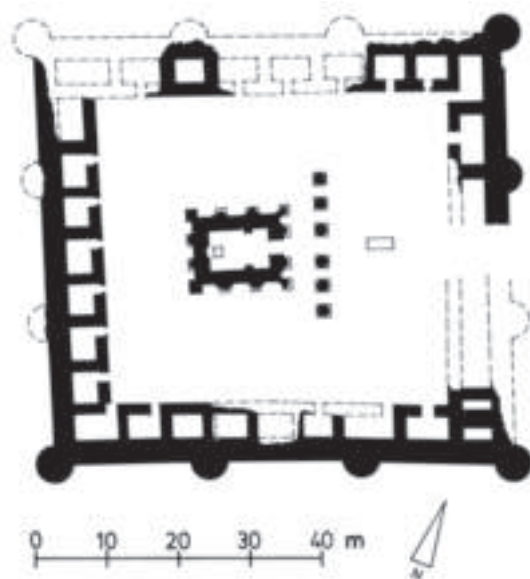


Fig. 5 Uruk, Sanctuary of Gareus, groundplan (drawn by M. Deshti after Downey 1988, 141 fig. 62).

¹⁴ Vogüé 1865–1877, 58, pl.18.22; Butler 1929, 84–5; Restle 1971, 991–2, fig. 13.

¹⁵ This temple was the find spot of statues and decorated entablatures whose sculptural modelling is identical with equivalent objects from the Temple of Baalshamin at Seeia, built between 33 BC and 13/12 BC or 2/1 BC: Freyberger 2000a, 167 pl. 36b. On the temple of the municipal goddess of Kanatha: see note 77. On the dating of the temple of Baalshamin at Seeia: see note 71. The surrounding wall of the sacral building at Kanatha including its towers simultaneously functioned as a retaining wall for the temple terrace. It must be older than the temple from the second half of the 1st century BC.

¹⁶ A dedicatory inscription from Shaqqa mentions a portal being dedicated to Zeus Megistos. The name of the gate, τὴν πόλιν, would fit well to this building, however it is not possible to attribute the inscription to this building, especially since the recorded find spot 'in a court yard' is far from precise: Waddington 1870, no. 2140; Sourdel 1952, 23 note 3.

¹⁷ The fortification wall was the earliest construction on this site and originated from the Parthian period. When the temple was built this wall lost its defensive function and was re-used as the temenos wall of the sanctuary: Reuther 1938, 435–6, fig. 110; Schmidt 1978, pl. 41; Downey 1987, 52–3, fig. R; Downey 1988, 141, fig. 62.

¹⁸ Meier 1960, 104–14.

¹⁹ Schmidt 1970, 89–91; Schmidt 1978, 30–8; Downey 1988, 137–8. It is quite certain that the Sanctuary of Gareus included an earlier temple from the Hellenistic period, which was probably made of mud brick, whereas the Temple of Gareus and large parts of the surrounding wall of the temenos were made of brick: Schmidt 1978, 35, pl. 40.

²⁰ Schmidt 1978, 33.

these towers, mainly those at the corners, were furnished with interior stairs. The corner towers with a diameter of 4 m provided ample space for stairwells.²¹ The Sanctuary of Gareus is characterized by another particularity: on all four sides, along the interior fronts of the precinct walls, there are rooms of the same depth that only open onto the courtyard and were all covered by one rooftop. This way the roof provided an elevated walkway around the temenos; in combination with the towers this would have been a place well suited for display and acting in the context of processions and other sacred rites.

A complex which may be compared to the temenos of the Sanctuary of Gareus exists at Babylon-Merkes, north of the Ishtar Temple, as is shown by the building

technique of the towers as well as by their rectangular bases.²² The predecessor of the current temenos wall of the Shamash sanctuary at Hatra was similarly designed, with round towers on the outside and on the inside rooms that opened onto the court.²³ Almost all sanctuaries in the Eastern Mediterranean world were provided with stairwells and rooftops, a long tradition that can be traced back to ancient Mesopotamian religious architecture.²⁴ However the monumental, fortress-like design with towers, which is so typical for the sanctuaries of Kanatha, Damascus, Uruk, Babylon and Hatra, is derived from the Hellenistic tradition of the East. The temple at Ikaros (Falaika) on the Persian Gulf, probably erected in the 3rd century BC, whose temenos has square towers, is a good testimony for the Hellenistic origin.²⁵

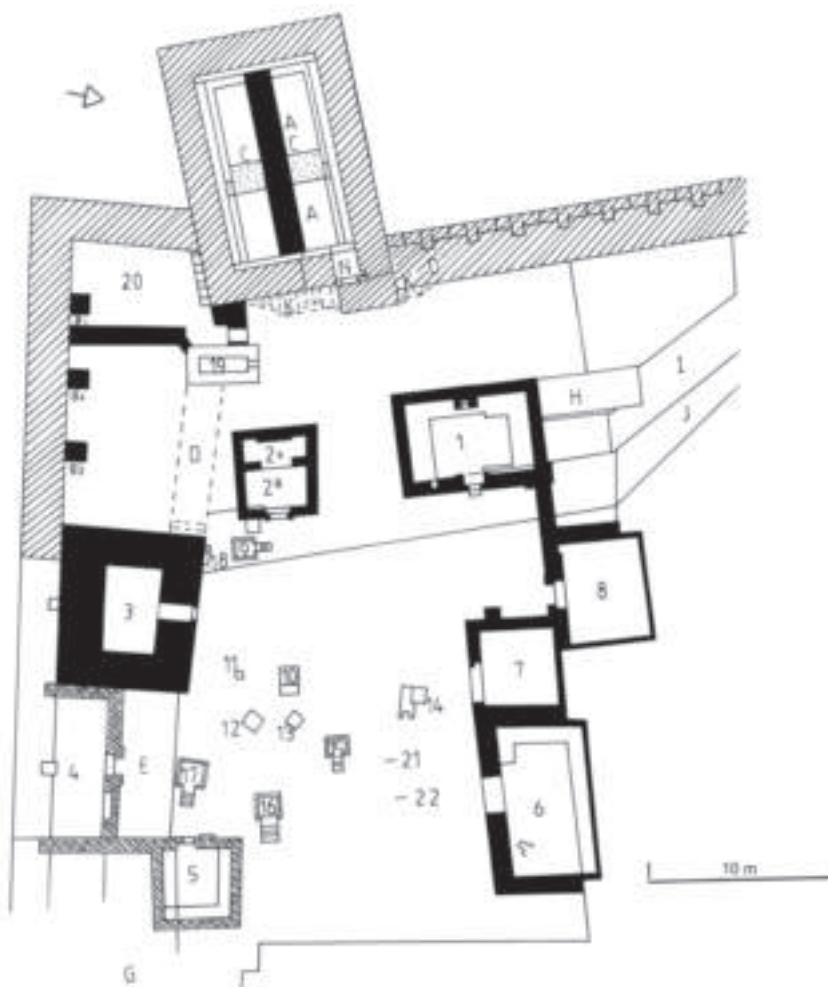


Fig. 6 Dura Europos, Sanctuary of Aphlad, groundplan (drawn by M. Deshti after Downey 1988, 111 fig. 48).

²¹ We might assume a circular staircase or a wooden flight of stairs. As a comparison, only the 3 m × 3 m staircase at the south-western corner of the Bel temple in Palmyra has a circular staircase made of stone.

²² The site was excavated by Iraqi archaeologists in about 1970: Schmidt 1978, 33–4; Downey 1988, 142.

²³ Schmidt 1978, 33–4; Downey 1988, 142.

²⁴ Frankfort 1969, 52, 55, 69, figs 19–20, 25–6.

²⁵ Jeppesen 1965, 541–4, fig. 1; Downey 1988, 142.

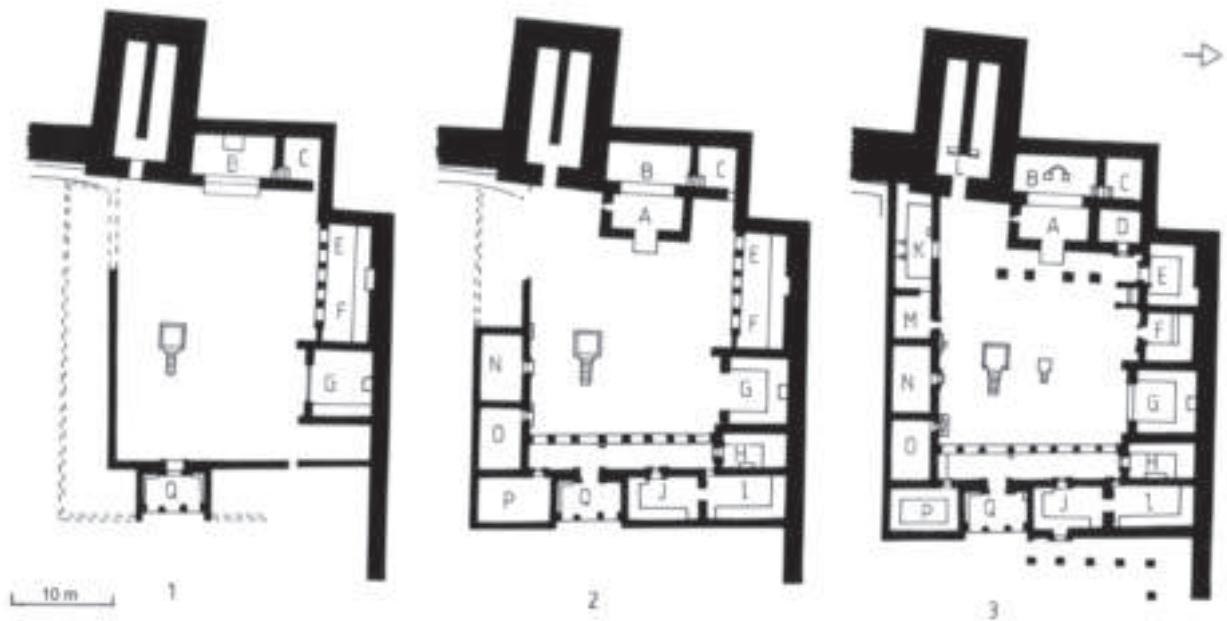


Fig. 7, 1–3 Dura Europos, Sanctuary of Bel, groundplan, phases 1–3 (drawn by M. Deshti after Downey 1988, 106 fig. 47).



Fig. 8 Dura Europos, Sanctuary of Azzanathkona, groundplan (drawn by M. Deshti after Downey 1988, 101 fig. 45).

THE SANCTUARIES AT DURA EUROPOS

Dura Europos, situated high above the western banks of the Euphrates, was a Seleucid foundation. Already in the latter part of the 2nd century BC, when the city was integrated into the Parthian empire, the local population and its material culture were heavily influenced by Mesopotamia. This was also true for the city's religious life: its sanctuaries show a basic common pattern mostly conforming to the so-called Babylonian 'Hofhaustempel'.²⁶ In the context of this study the four sanctuaries of Aphlad (Fig. 6),²⁷ Bel (Fig. 7, 1–3),²⁸ Azzanathkona (Fig. 8)²⁹ and Zeus Kyrios (Fig. 9, 1–3)³⁰ at Dura are particularly relevant. All these sacred sites were built within the settled areas and adjacent to the city walls as well as to its fortified towers, so that the respective parts of the walls themselves became parts of the sanctuaries and as a result received a sacred function and significance. Interestingly, the Sanctuary of Bel, which is built into the north-eastern corner of the city wall, has a fortified tower which is accessible only from the temenos, at the same time forming the southern surrounding wall of the naos (Fig. 7, 1–3). Even if the tower as well as the curtain wall leading northwards retained their functions as the city's fortified wall, they were now also used for the cult in connection with the sanctuary. It may be suggested that the wall-walk at the north-western corner was also used for ritual purposes. The same situation is valid for the Aphlad sanctuary at the south-western corner of the city wall and for the Azzanathkona sanctuary which is built at the northern side (Figs 6, 8). The sanctuary of Zeus Kyrios, which is to the north of the Temple of Aphlad, gives testimony to quite a different manner of cultic use. For this cult site, built adjacent to Tower 16, three building phases in the period between 28/29 and 160 AD (Fig. 9, 1–3) have been determined.³¹ During the first phase a courtyard existed that served as a holy precinct covering only the northern half of the eastern front of the tower without integrating the tower entrance (Fig. 9,1). The back of the altar, consecrated in 28/29 AD, directly connects to the north-eastern corner



Fig. 9, 1–3. Dura Europos, Sanctuary of Zeus Kyrios, groundplan, phases 1–3 (drawn by M. Deshti after Downey 1988, 102 fig. 46).

of the fortified tower.³² A votive relief of Zeus Kyrios was built into the eastern side of this building, 5.15 m above the ground level of the precinct.³³ According to the date given by an Aramaic-Greek dedicatory inscription at the lower edge of the relief, the image must be dated to the year 31/32 AD.³⁴ According to the position of the relief and the representation of the god with his dedicator, it is not a cult relief but an ex-voto.³⁵ This raises the

²⁶ Freyberger 1998, 117.

²⁷ Rostovtzeff 1934, 98–104; Eissfeldt 1941, 139–40, fig. 33; Downey 1976, 24–5, fig. 3; Downey 1988, 110–12, fig. 48.

²⁸ Eissfeldt 1941, 134–9, figs 31, 32; Downey 1976, 23–4, fig. 2; Downey 1988, 105–10, fig. 47.

²⁹ Eissfeldt 1941, 129–33, figs 28, 29; Downey 1976, 25–7, fig. 4; Downey 1988, 99–101, figs 44, 45.

³⁰ Rostovtzeff *et al.* 1939, 284–92, figs 73–7 pls. 9.2, 10, 11; Eissfeldt 1941, 13–14, fig. 30; Downey 1976, 27–9, figs 5–7; Downey 1988, 101–2, fig. 46; Dirven 1999, 220–2, fig. 6; Niehr 2003, 165–7, Map 7.

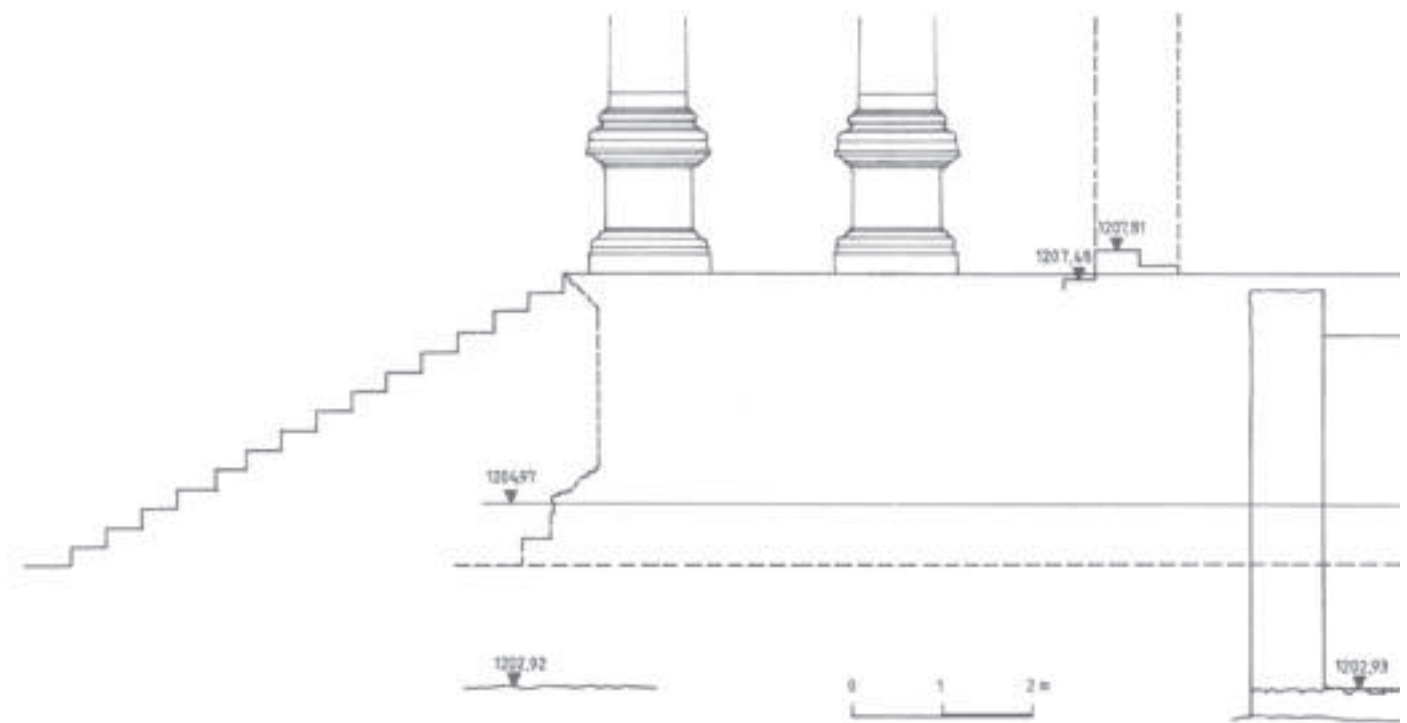
³¹ A dedicatory inscription from the year 28/29 AD is the oldest epigraphic evidence from the sanctuary: see note 32. The third building phase took place after the sanctuary had been damaged by an earthquake in the year 160 AD. In the course of the restoration the ground level of the courtyards was considerably raised and the portal of Tower 14 was closed: Rostovtzeff *et al.* 1939, 290–2; Dirven 1999, 222.

³² Rostovtzeff *et al.* 1939, 307 no. 914; Dirven 1999, 211–12.

³³ Rostovtzeff *et al.* 1939, 292–302, pl. 37; Perkins 1973, 76–7, fig. 30; Downey 1977, 31–4 no. 10; Mathiesen 1992, 197 no. 174, fig. 54; Dirven 1999, 219–20, pl. 2; Niehr 2003, 164.420, fig. 28.

³⁴ Rostovtzeff *et al.* 1939, 307–9 no. 915b–c; Hillers & Cussini 1996, no. 1089; Dirven 1999, 212–18; Niehr 2003, 164.

³⁵ Niehr 2003, 164–5.



question of where the original cult image was placed. As the sanctuary had only one temenos and in its second phase received another two banquet rooms to the north (Fig. 9, 2), it seems very likely that the only possible place for the erection of the idol was the holy precinct. The cult statue probably stood in front of the façade of the tower and close to the altar. The sanctuary of Zeus Kyrios is a very modest, hypaethral sacred complex whose worshippers were local inhabitants of this part of the Euphrates region.³⁶ Building the sanctuary at the city wall was advantageous for the temple personnel and clients in several ways. Tucked behind the high wall the sacred site was relatively well protected from the wind and the inclusion of already existing, solid masonry was helpful during construction and also cost efficient. Religious grounds were most likely responsible for this annex. This part of the wall and the entire eastern front of Tower 14, which was included into the structure during the third phase (Fig. 9, 3), were now parts of the sanctuary and thus protected by the god.

Protective function of the fortified walls

The precinct walls of the sanctuaries with their curtain walls and towers did not only have a religious but also a protective function. Since many goods and other valuable objects were stored at the cult sites they had to be protected against robbery and theft.

THE FORTIFIED WALLS AS A PROTECTION FOR STORED GOODS

The solid construction of the ashlar walls – the outer wall was constructed of roughly hewn blocks with finely chiselled edges – visibly emphasizes the protective function of the surrounding walls. In the courtyards, towers and temple goods were stored which had to be secured against theft and robbery. At night, all entrances to the sanctuaries were closed.³⁷ It is striking that many religious buildings in Southern Syria and the Hermon region were provided with a considerable number of

³⁶ The archaeological and epigraphic evidence does not provide any indication for the assumption that merchants from Palmyra were among the clientele of the sanctuary of Zeus Kyrios. The style and material of the above-mentioned votive relief are completely different from the secured limestone images from Palmyra: Dirven 1999, 220.

³⁷ According to a report by Joseph Ap. 2.9, all gates of the front courts of the temple in Jerusalem were closed. Two hundred people were needed each time to close the gates.

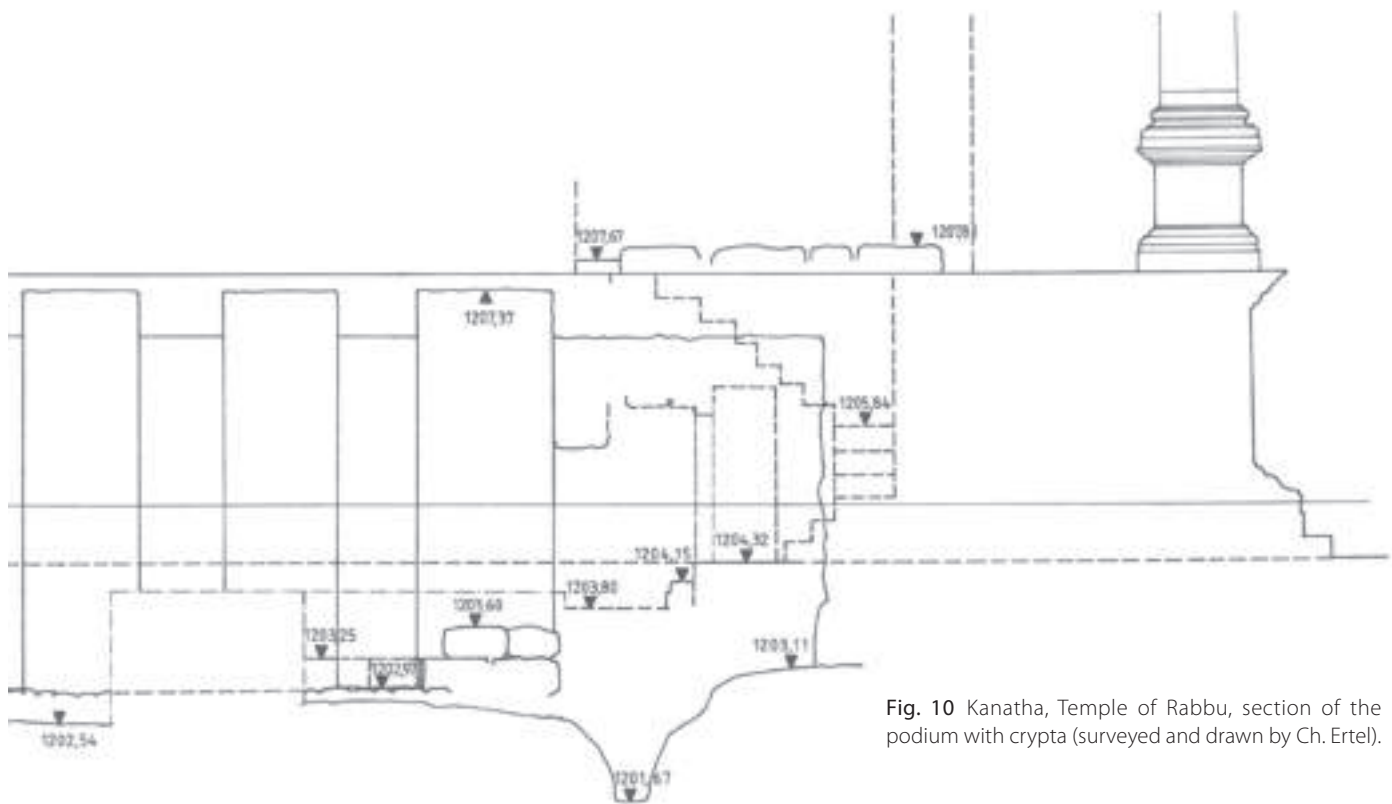


Fig. 10 Kanatha, Temple of Rabbu, section of the podium with crypta (surveyed and drawn by Ch. Ertel).

storage rooms and chambers. The huge sanctuaries at Kanatha provide telling examples. In its podium, the Temple of Rabbu is provided with a monumental crypt which was suitable as a secure place for many goods (Fig. 10).³⁸ The same holds true for the eastern side chamber of the adyton in the 'Western Temple' of the 'Serail' at Kanatha (Fig. 11).³⁹ Due to its location adjacent to the adyton, this chamber was not open to the public, and its use was reserved for temple personnel. The monumental towers which stood at the corners of the precinct wall of the Tyche of Kanatha offered sufficient space for storing considerable amounts of goods.⁴⁰ They were accessible only from the courtyards and could be reached via corridors; the towers at the south-eastern and south-western corners demonstrate this.

The precinct walls served as a protection for the goods and wealth donated to the sacred sites. The main source of income was the cult. Foreign endowments and voluntary donations contributed to the development of considerable fortunes.⁴¹ Real documents existed recording the acquired rights and wealth of the temples. Often the sanctuaries received votive offerings for cult purposes or for the decoration of religious buildings. Famous people such as Ptolemy Philadelphus,⁴² Marcus Agrippa⁴³ and Augustus⁴⁴ honoured the temple in Jerusalem by donating sacrifices and votive offerings. According to Lucian's report,⁴⁵ the temple of Hierapolis received huge sums from Babylonia, Cappadocia, Arabia and Phoenicia. There is further evidence for donations in cash to the sacred buildings at Gerasa,⁴⁶ Palmyra⁴⁷ and Dura Europos.⁴⁸ As the cult

³⁸ Concluding from the number and size of the crypts of the Hermon sanctuaries, they served primarily as depots for goods and commodities: Freyberger 2006, 233–6, figs 4–6.

³⁹ Butler 1904, 357–61, fig. 126; Amer *et al.* 1982, 281–2, maps 1, 2; Freyberger 2010, 242–4, figs 4–6.

⁴⁰ See note 77.

⁴¹ Schürer 1979, II, 274.

⁴² Joseph Ap. 2.5.

⁴³ When Marcus Agrippa came to Rome in the year 15 AD, he donated 100 bulls as sacrifice: Joseph AJ 16.2.1.

⁴⁴ Augustus funded sacrifices for the temple in Jerusalem from the Imperial funds: Heichelheim 1938, 248.

⁴⁵ Lucian. Syr. Dea §10.16.

⁴⁶ SEG VII, 376, 377, 893, 894; IGR III 1344, 1351, 1355.

⁴⁷ Cantineau 1933, 15–17, no. 8; on donations in cash to sanctuaries: Heichelheim 1938, 247–8.

⁴⁸ SEG II, 776.

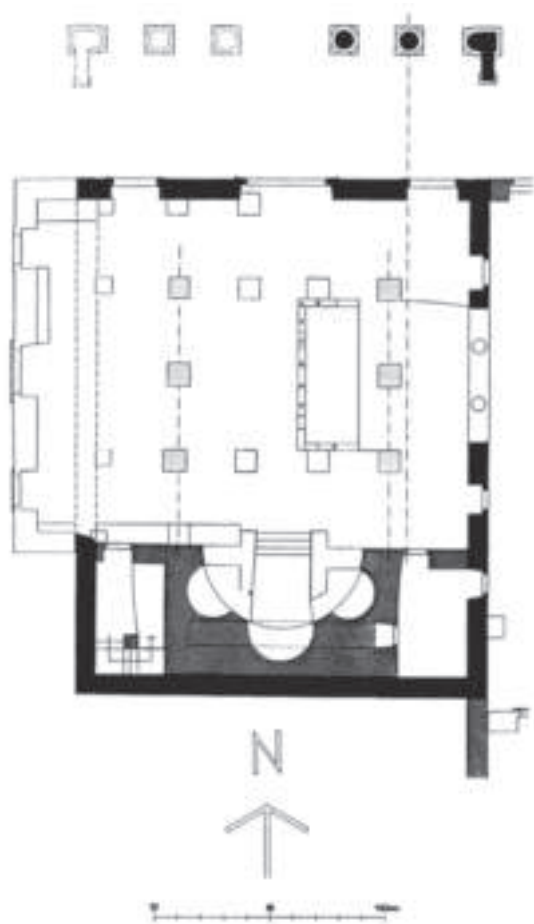


Fig. 11 Kanatha, 'Serail', 'western temple', groundplan, reconstruction (surveyed and drawn by Ch. Ertel).

buildings were considered secure storage places, the goods and money of private owners were also deposited there. Widows and orphans made the most use of this option.⁴⁹

Valuable objects were stored in several treasure chambers as for example in the temple in Jerusalem as reported by Flavius Josephus.⁵⁰ The temple needed huge sums of money to pay for the many offerings, the equipment and maintenance of buildings and wages for the many members of the temple staff.

The larger sanctuaries were real banks.⁵¹ At the temple of Jerusalem there were archives where contracts, court files and debt lists were kept.⁵² The latter give evidence to the temple's treasury. They were independent of the municipal treasury,⁵³ and also gave loans. The treasury was not only capable of financing houses for the members of the temple staff,⁵⁴ which the latter paid back from their own income, but it also paid for other buildings of a public nature, such as aqueducts, oil mills and even privately owned houses.⁵⁵ Against this background, the temenos walls with their tower structures had a concrete function: the surrounding walls served as a barrier against intruders and also against the herds of Bedouins and at the same time as a protective wall for the goods stored at the sanctuaries.

THE FORTIFIED WALLS AS A PROTECTION OF RESOURCES

The extraordinary position of the sanctuaries is not only expressed through their numerous privileges but also by their possession of extensive resources, water being the most important of them. The equipment and images of numerous sanctuaries⁵⁶ illustrate the fundamental significance water held for the cult. At the sacred sites water, an essential basis of life, was stored in huge basins,⁵⁷ underground cisterns⁵⁸ and other reservoirs.⁵⁹ Near the temple of the sanctuary of Baal Marqod at Beit Mery, north-west of Beirut, there was a healing spring.⁶⁰

⁴⁹ Schürer 1979, II, 281.

⁵⁰ The treasure chambers called *γαζοφυλάκια* were in the inner front courtyard of the temple: Joseph BJ 5.5.2; 6.5.2.

⁵¹ In the Republican period the public treasury, the *aerarium*, was kept inside the high podium of the Temple of Saturn. Along with the Temple of the Dioscuri, keeper of the bank depots, the Basilica Aemilia, the Basilica Iulia and the Temple of Iuno Moneta on the *arx*, the place where the coins were struck, this area was the monetary centre of Rome: Freyberger 2009a, 45.

⁵² Joseph BJ 2.17.6, the state archive of ancient Rome was quite likely in the *templum urbis Romae* on the Forum Romanum. At the back of the building, its vestibule is probably identical with the 'Temple of Romulus', there was the famous marble map of Rome, the *Forma Urbis*: Freyberger 2009a, 112, 114–17, fig. 76.

⁵³ Schürer 1979, II, 279 note 21.

⁵⁴ IGR III 1096, 1293, 1314.

⁵⁵ IGR III 1009, 1137; SEG VII, 216; Heichelheim 1938, 248.

⁵⁶ A number of images in the Baalbek sanctuary praise water as a life-giving tonic: Freyberger 2000b, 120.

⁵⁷ A well-known example of this is provided by the Birketein site at the northern gate of Gerasa. Most probably the two basins served for ritual walks: Schumacher 1902, 165–71, figs 39–42; McCown 1938, 159–67, pls 32b–35a; Segal 1988, 30–1, figs 96–100; Segal 1995, 71, figs 79–83.

⁵⁸ At the sanctuaries at Seeia, Kanatha and Slim there are huge cisterns below the holy precincts with enormous storage capacities: Freyberger 2004b, 59–62, figs 1–3.

⁵⁹ Many sanctuaries in the Hauran have open water basins. Originally they were quarries and the depressions were then used as water reservoirs: Freyberger 2004c, 337–44, figs 1–8.

⁶⁰ CIG III 4536.

The sanctuaries at Seeia and Kanatha in the Hauran (Southern Syria)

The sanctuaries at Seeia and Kanatha are exposed on the highlands of the Auranitis in Southern Syria, the present-day Djabal al-Arab. They are characterized by an efficient water supply system (Figs 12–13).⁶¹ The natural environment determined the choice in location of cult sites, most importantly water resources which were concentrated in the area between Kanatha and Seeia, lying 2.5 km to the south-east. The spring water from the slopes of Djabal al-Arab was collected in underground channels, the *kanate*, at the headwaters of Wadi Sayeh near Seeia, from where it flowed about 4 km to Kanatha, which is located at a significantly lower elevation (elevation difference of 300 m) (Fig. 14).⁶² At the sanctuaries in the upper part of Kanatha the water was stored in monumental cisterns and distributed to the lower parts of the city through a network of canals. Already in the pre-Hellenistic period a system of underground canals existed that was furnished with spring tapplings as well as maintenance and collecting shafts. It was the essential water supply system with its *kanate* which gave the city its ancient name of Kanatha as well as its modern name of Qanawat.⁶³

The sanctuary of Zeus Uranios at Baitokaike (Hossn Soleiman)

The sanctuary at Baitokaike is located at the bottom of a valley in the southern foothills of the Syrian coastal mountains near the modern village of Hossn Soleiman. It controlled a technologically advanced water supply system in Hellenistic and Roman times.⁶⁴ Decisive in choosing this place were the rich water resources and the presence of medicinal plants. Originally the site had been an open natural sanctuary which, probably during the rule of the Seleucids, was monumentally expanded. The architectural framework consisted of two precincts

surrounded by walls and furnished with gates and cult buildings (Fig. 15).⁶⁵ Renovations took place in the 2nd and the early 3rd centuries AD, and the building structures from the Hellenistic period were mostly maintained. The dedicatory inscriptions refer to this period, without explicitly mentioning the construction as having served any restoration purposes.⁶⁶ According to the dedicatory inscriptions, the entire sanctuary was dedicated to Heavenly Zeus of Baitokaike.⁶⁷

The archaic appearance of this cult site is still conveyed today by the gigantic ashlar masonry of the temenos walls and the partly monolithic jambs of the portals (Fig. 16).⁶⁸ Given the construction technique of the walls and the size of the ashlar blocks, the function of these massive walls invites investigation particularly due to the disproportionate size of the walls in relation to the size of the entire site. Criteria for answering this question are provided by the establishments and furnishings which depend on the various functions of the sanctuary. According to the text of a dedicatory inscription from the little precinct, the sanctuary at Baitokaike was a healing and therapeutic centre in the region, taking advantage of the medicinal plants and the high-quality spring water.⁶⁹ The latter point is supported by archaeological findings. Both the location and expansion of the two precincts was determined by the intention to make optimum use of the spring water. In both precincts the springs were tapped by collecting the water in underground chambers (Fig. 15).⁷⁰ Additional well rooms were built at the outer side of the western wall. Pipes led from the collecting rooms to a basin and a spa building at the bottom of the valley to the west of the sanctuary, both serving as therapeutic centres. The spring water and the medicinal plants were profitable resources for the sanctuary. To prepare both for therapeutic use they had to be collected, then stored, processed and finally distributed. This required not only huge storage capacities in the precincts but also fortress-like walls which protected the stored goods and resources against theft, abuse and pollution (Fig. 16).

⁶¹ On the reconstruction of the sanctuaries: Freyberger 2009b, 286, figs 17, 18; 289, fig. 21.

⁶² Freyberger 2009b, 287, figs 19, 20.

⁶³ On Kanatha's water supply: Freyberger 2004b, 263–73.

⁶⁴ Krencker & Zschietzschmann 1938, Taf. 1; Millar 1993, 568, plan 4.

⁶⁵ Krencker & Zschietzschmann 1938, 65–101, pls 31–51; 117, 17, 19, 20; figs 89–133; Steinsapir 1999, 182–94; Steinsapir 2005, 31–45; Freyberger 2004d, 13–40, fig. 1; Ertel & Freyberger 2008, 731–77, figs 1, 2, 38; Freyberger 2009b, 265–92, plans 1–6.

⁶⁶ Rey-Coquais 1970, nos 4028–33; on the chronology: Freyberger 2004d, 27–31; Ertel & Freyberger 2008, 761–7; Freyberger 2009b, 277–82.

⁶⁷ Steinsapir 2005, 32; Ertel & Freyberger 2008, 767–70; Freyberger 2009b, 282–3.

⁶⁸ Freyberger 2004d, 14–22, fig. 2, pls 2–3; Ertel & Freyberger 2008, 761–6, figs 57–60; Freyberger 2009b, 272–3, figs 2–5; 276–80, figs 8, 10–12.

⁶⁹ Rey-Coquais 1997, 931–42, figs 1–4.

⁷⁰ Steinsapir 2005, 33; Ertel & Freyberger 2008, 758–61 figs 54–6; Freyberger 2009b, 270–1, plans 4–6.



Fig. 12 Seeia, sanctuary, view from east to west, 3-D-model (3-D-models made by S. Franz and V. Hinz according to plans by K. Schnädelbach, TU-München, and to a reconstruction by C. Ertel).



Fig. 13 Kanatha, town centre with the sanctuaries, 3-D-model (3-D-models made by S. Franz and V. Hinz according to plans by K. Schnädelbach, TU-München, and to a reconstruction by C. Ertel).



Fig. 14 Underground canals (*kanates*) between the sanctuaries at Kanatha and Seeia, 3-D-model (3-D-models made by S. Franz and V. Hinz according to plans by K. Schnädelbach, TU-München, and surveys made by V. Schnitzer).

The semantic meaning of fortified walls

According to the presented examples, the precinct walls with their curtain walls and towers had a meaning which was firmly rooted in the cultic and economic aspects of the sanctuaries. Nevertheless there are some cases where walls surrounding the sacred sites had an additional semantic meaning. The sanctuaries at Seeia and Kanatha provide evidence for this point.

THE TEMPLE OF THE TYCHE OF SEEIA

The terrace sanctuary at Seeia⁷¹ corresponds to the terrace sanctuary in the upper city of Kanatha in its arrangement and number of four temples. In the second precinct a temple stood below the main temple of Seeia, which is dedicated to Baalshamin (Fig. 12).⁷² According to H.C. Butler's reconstruction, a square naos surrounded by a corridor on all four sides was inside the temple.⁷³ A

⁷¹ The huge dedicatory inscription from the Temple of Baalshamin at Seeia dates the beginning of the erection of this cult building to the year 33/32 BC: Littmann 1905, 85–90, no. 1, figs 35–8; Littmann 1914, 76–8, no. 100. Before the temple could be erected, new terraces had to be constructed on the rocky plateau and terrace walls had to be built. According to these facts, the planning and the start of the construction works for the monumental extension of the sanctuary must be dated to the Hellenistic period. On the Temple of Baalshamin: Vogüé 1865–77, 31–8, pls 2–4; Butler 1904, 334–40; Butler 1907–21, 373–85, figs 324–34, Taf. 28; Butler-Murray Jr 1917, 11–12; Freyberger 1998, 48–50, pls 29b, 30, 31, 33c Beil. 13a, b, 14a; Steinsapir 2005, 11–30.

⁷² Butler 1909, 79–96; Butler 1907–21, 386–90, Abb. 335–7; Butler-Murray Jr 1917, 12–14; Freyberger 1998, 50, pls 29c, d, 32a–c, 33a, b Beil. 13a, b, 14b.

⁷³ Butler 1907–21, 386, fig. 335. Judging from the preserved wall fragments of the back, the temple of the Tyche of Seeia was rather a naos with a surrounding corridor than a broad room temple as has been suggested by Dentzer 1989b, 144–5, fig. 2.

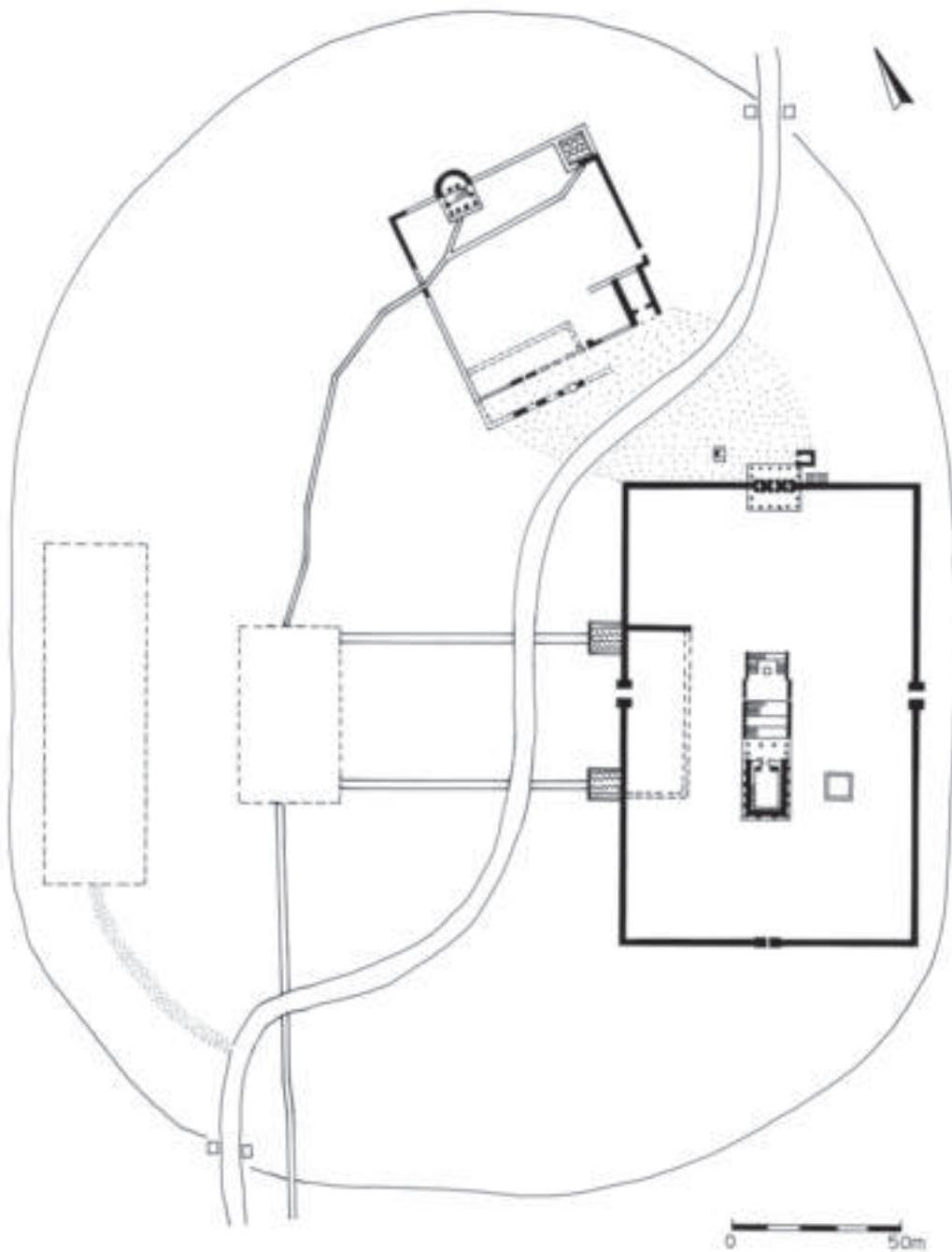


Fig. 15 Baitokaike, Sanctuary of Zeus Uranios, groundplan, reconstruction (reconstruction and drawing by C. Ertel).

bilingual dedicatory inscription in Greek and Aramaic⁷⁴ as well as a statue found in the second precinct testify that the Tyche of Seeia was worshipped in this sacred building.⁷⁵ The statue is an image equivalent to the text of

the dedicatory inscription calling Seeia the goddess who towers over the Hauran plain: the goddess is standing on the shoulders of a young man who is decorated with vine tendrils and likely the personification of Hauran.

⁷⁴ Littmann 1914, 81–3 no. 103, fig. 13.

⁷⁵ Butler 1907–21, 388–9, figs 336–7 (fragment of a statue); on interpreting the temple: Dentzer-Feydy 1979, 325–32.



Fig. 16 Baitokaike, Sanctuary of Zeus Uranios, great precinct, northern wall (K.S. Freyberger).

In an ingenious way the hierarchical relationship of the two deities is architecturally emphasized by the temple of Baalshamin, the highest god of Seeia, clearly located higher than the sacred building of the local goddess. At the same time, however, the architectural disposition of the two sacred buildings expresses that the goddess is protected by the god of the heavens. The staging is not only visual through the temples, but also through the fittings of the courtyards. The second temenos is marked by walls in the shape of a city wall with towers and by a propylon designed as a city gate. This architectural framework symbolizes the place of Seeia.

THE TEMPLE OF THE TYCHE OF KANATHA

The relationship between the highest god and the Tyche is increased through the display of the architectural ensemble of the sanctuaries in the upper city of Kanatha. The temple of Zeus Megistos towers on the uppermost terrace. In view of his qualities and his rank Zeus is the equivalent of Baalshamin (Fig. 13).⁷⁶ One terrace below, at a right-angle an almost square temple follows with

a ground plan very similar to the sacred building of the goddess of Seeia.⁷⁷ Due to this similarity it may be suggested that this cult building was the temple of the Tyche of Kanatha. The architectural staging is entirely dedicated to the praise of the Tyche and thus of the city. As a result of its elevation in political importance at about the mid-1st century BC, shortly after the founding of the province of Syria, Kanatha became the most important city of the Auranitis.⁷⁸ The old precinct was extended to the west, for the purpose of erecting a fortress-like temenos wall with massive fortified towers. The result of this adjustment meant that the temple of the Tyche of Kanatha with its temenos and surrounded by a city wall now formed the centre of the entire sacred site and the sanctuaries of the other deities moved to the fringes.⁷⁹ The front of the temple of Zeus Megistos was included into the second precinct, in order to demonstrate the close relationship of the goddess to the ruler of the world. The city wall in the precinct of the sanctuary of the Tyche of Kanatha has a semantic connotation: the priesthood to which this cult place belonged referred self- confidently to the autonomous status of Kanatha. At the same time, the fortified wall evokes security and protection, which Zeus Megistos granted to the goddess and thus to the city.

The similarities of the structure and shape of the monumental terrace sanctuaries at Seeia and Kanatha raise the question of the relationship between these two cult sites (Figs 12, 13). The fact that Seeia was located in the territory of the city of Kanatha is essential; its sanctuary was nothing other than an offspring of the latter city's cult site.⁸⁰ Accordingly, the sacral site of Seeia was not an autonomous sanctuary but a cult building owned by the city of Kanatha. This ownership is illustrated not only by the fact that a road connected the complex at Seeia with the sanctuaries in the upper city of Kanatha but also by the architectural orientation and alignment of the two temple fronts of the goddesses of Seeia and Kanatha to each other.

⁷⁶ Freyberger 2000a, 155–75; Freyberger 2010, 241, fig. 2. According to the dedicatory inscriptions this temple was dedicated to Zeus Megistos: inscription by Publios Ailios Germanos: Waddington 1870, no. 2339; Prentice 1908, 321 no. 413 a; Sourdel 1952, 23 note 6; inscription by Tigranes (?) Antiochos: Waddington 1870, no. 2340; Prentice 1908, 320 no. 413; Sourdel 1952, 23, n. 6.

⁷⁷ Mascle 1944, 77. Before this building could be identified as the temple of the Tyche of Kanatha, it was called 'Temple no. 2': Freyberger 2010, 241–2, figs 3, 4.

⁷⁸ Graf 1992, 25–7; Sartre 2001, 452–8.

⁷⁹ Freyberger 2009b, 289, fig. 21; Freyberger 2010, 242, fig. 4.

⁸⁰ According to a bilingual dedicatory inscription from Seeia, carved in a basalt stele, in the year 204 the four gods Baalshamin, Seeia, Isis and Malakelaha' were introduced to Seeia. According to Milik's reading, the inscription must be dated to after the Seleucid Period 105/104 BC: Milik 2003, 269–74, pl. 180; Niehr 2003, 231. Likely the priests of Kanatha transferred the four deities to Seeia with the intention of including this water-rich place into the territory of Kanatha: Freyberger 2014, 140.

The significance of the sanctuaries

It seems very likely that the priests of larger sanctuaries administered the water resources, thus securing a potential of energy which made the sanctuaries the most important buildings of the respective settlements. Just as the sacral site at Baitokaike (Figs 15, 16), many other sanctuaries also had their own estates. Their agricultural products secured the priests' livelihood and could also be sold in markets or be exchanged for other goods. Against this background, the dominant position of the sacral buildings in cities and villages becomes understandable: as centres of public life, they met the religious, social, commercial and personal needs of the local communities. Access to water as well as its distribution was in the hands of powerful priesthoods. According to this interpretation, the sanctuaries must be considered sacral seats of power within whose field of interaction religious, political, economic and social processes were connected with each other. The significance of these sacral seats of power also had to be displayed by an appropriately dignified architectural framework, the massive, fortress-like precinct walls with their fortified towers marking the sanctuaries as the most important and powerful places in the settlements. However, these walls were not only monumental signs of the significance of the cult sites; they also served certain purposes in the context of religious and economic life at the sanctuaries.

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Abbreviations:

- CIG III Corpus inscriptionum graecarum (Berlin 1853).
 IGR III R. Cagnat, *Inscriptiones graecae ad res romanas pertinentes III* (Paris 1906).
 SEG Supplementum epigraphicum graecum.

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FORTIFIED PALACES AND RESIDENCES IN HELLENISTIC TIMES: THE UPPER CASTLE ON MOUNT KARASIS AND OTHER EXAMPLES

Timm Radt

Abstract

The ruins on Mount Karasis in Cilicia were discovered only in 1996.¹ This spacious and extraordinarily well-preserved Hellenistic site is entirely surrounded by fortification walls. Furthermore its inner centre on the highest peak is formed by a palatial structure which is fortified itself – the so-called Upper Castle. The analysis of its fortifications reveals that they widely followed the concept of the outer defences and aimed to prevent an enemy from reaching the walls by laying heavy artillery fire on the few possible zones of access. However, at a closer look it also becomes obvious that their appearance was not only caused by the need for fortification, but was rather planned in order to create a crown that strongly differed from the outer defences' form and made the Upper Castle recognizable as the representative heart of the whole ensemble.

As comparable structures and concepts, i.e. a similar mixing between representative and fortificational architecture can also be found at some other sites, the conclusion is that there was a common pattern on the basis of which fortified palaces were generally planned. Nevertheless, striking differences between these objects show that within this pattern individual variations were possible.

Background

During the last 15 years, Turkish epigraphist Mustafa Hamdy Sayar of Istanbul University has been conducting surveys throughout Cilicia. In 1995, locals showed him a vast field of ruins on top of the 1000 m high, steep Mount Karasis in north-eastern Cilicia. No further research was

necessary to recognize that the site dated from ancient times and that until then it had been unknown to scholars.² Sayar then contacted the Istanbul department of the German Archaeological Institute, and, as a result, three field campaigns were carried out between 2003 and 2006.³ The project was directed by Mustafa Sayar and Prof. Dr Adolf Hoffmann, then first director of the

¹ Latest overview: Radt 2011a, 49–63.

² Sayar 1995.

³ Preliminary report: Hoffmann and Sayar 2007. For detailed information on certain aspects see Radt 2008; Radt 2009; Radt 2010; Bachmann 2011; Hoffmann 2011; Polla 2011; Radt 2011a; Radt 2011b.

Istanbul department of the German Archaeological Institute, and involved scholars from different countries and institutions.⁴

Amongst the best preserved remains on Mount Karasis are the long walls that surround the whole site. Therefore initially the ensemble was generally characterized as a fortress. However, closer examination led to a more precise interpretation as a heavily fortified palace or residence.⁵ The analysis of the architecture and the concept of the fortifications proves its creation in Hellenistic times but also shows that certain important buildings remained unfinished. In a second, later phase these buildings were completed only partially and by using building material of lesser quality (rubble stone). This evidence corresponds with the results of an archaeological survey that was carried out simultaneously with the field campaigns on the mountain and its surroundings. By far the greatest portion of the pottery collected during this survey does not date from the Hellenistic period but from the 1st century BC and the 1st century AD.⁶ This proves on the one hand that the project was started in Hellenistic times and was given up only shortly before completion and on the other that the site was in use only some 150–250 years later, when the purpose for which it had originally been planned was no longer effective.

So far, despite these assumptions, it cannot be determined who initiated the construction and who occupied the site in the late phase of utilization, as no written source, either from Hellenistic or from Early Roman times, can be connected with the site. Thus interpretation can only be based on the general knowledge of the historic situation in the region. Current research implies that the project was started under Seleucid rule, i.e. most likely under Antiochos III.⁷ This ruler might have planned the site as a secure retreat when travelling from east to west.⁸ After his defeat at Apamea, which forced the Seleucids to withdraw behind the Taurus Mountains, the site might no longer have been necessary. Probably the ‘Tarcondimotides’, a local dynasty which evolved from the Cilician pirates and that had its seat in Anazarbos, were responsible for the reoccupation of the site during the 1st century BC and the 1st century AD.⁹

Overview

Mount Karasis is located in the northern part of Eastern Cilicia about 13 km north of Kozan in the province of Adana. The mountain stands isolated on all sides (Fig. 1). While its western flanks are very steep and interspersed with rocky cliffs, the eastern flanks are less steep. The ruins are located on top of the mountain. The walls that surround it are 2.4 km long and at an altitude that ranges from 900 m to 1050 m. The enclosed area is c. 20 hectares. Inside the walls three parts can be distinguished: first the so-called ‘Lower Castle’ in the south, second the so-called ‘Upper Castle’ in the north-west – both with a rather dense building structure – and third, a wide slope between the Upper and the Lower Castle with hardly any structures within it (Fig. 1). The plan of the Lower Castle is mainly determined by three large artillery towers and extensive casemate walls on the northern flank. The walls and towers there are well preserved, standing to a height of 12–16 m. The ruins of the Upper Castle are less well preserved. Only in certain areas do the remains of walls stand higher than 1 m. Nevertheless, the general structure of the ensemble can be reconstructed.

The concept of the fortifications

THE LOWER CASTLE

Throughout history the layout of fortifications and their design in detail reacted to the topography in which they were set. Regarding this aspect the location on Mount Karasis was well chosen, as the steepness of its rocky flanks made it almost impossible to lead any major attack on the site. Thus the outer walls are throughout their length only 1.2 m thick and show no special features.

Special measures were taken only in one area. This was the northern flank of the Lower Castle, which faced a wide slope that descends to a plateau on the eastern flank of the mountain (Fig. 1). Although steep, this slope provided relatively good conditions for a strike by an enemy. To counteract this, there was a double line of defence consisting of a simple *proteichisma* in the front

⁴ The participants came from Turkey, Italy, the United States and Germany.

⁵ See Radt 2010; Radt 2011a; Radt 2011b; and Hoffmann 2011.

⁶ Polla 2011.

⁷ See Radt 2011b, 58; Hoffmann 2011, 82.

⁸ See Radt 2011b, 58; Hoffmann 2011, 79. Although it is possible that the site was connected to Anazarbos which was a city not later than the late 1st century BC, the region seems to have had no urban centres during Hellenistic times; see De Giorgi 2011, 135; Posamentir 2011, 115–17. For Hellenistic sites near Mount Karasis see Vos Raaijmakers *et al.* 2011.

⁹ See Hoffmann 2011, 78; Posamentir 2011, 116.

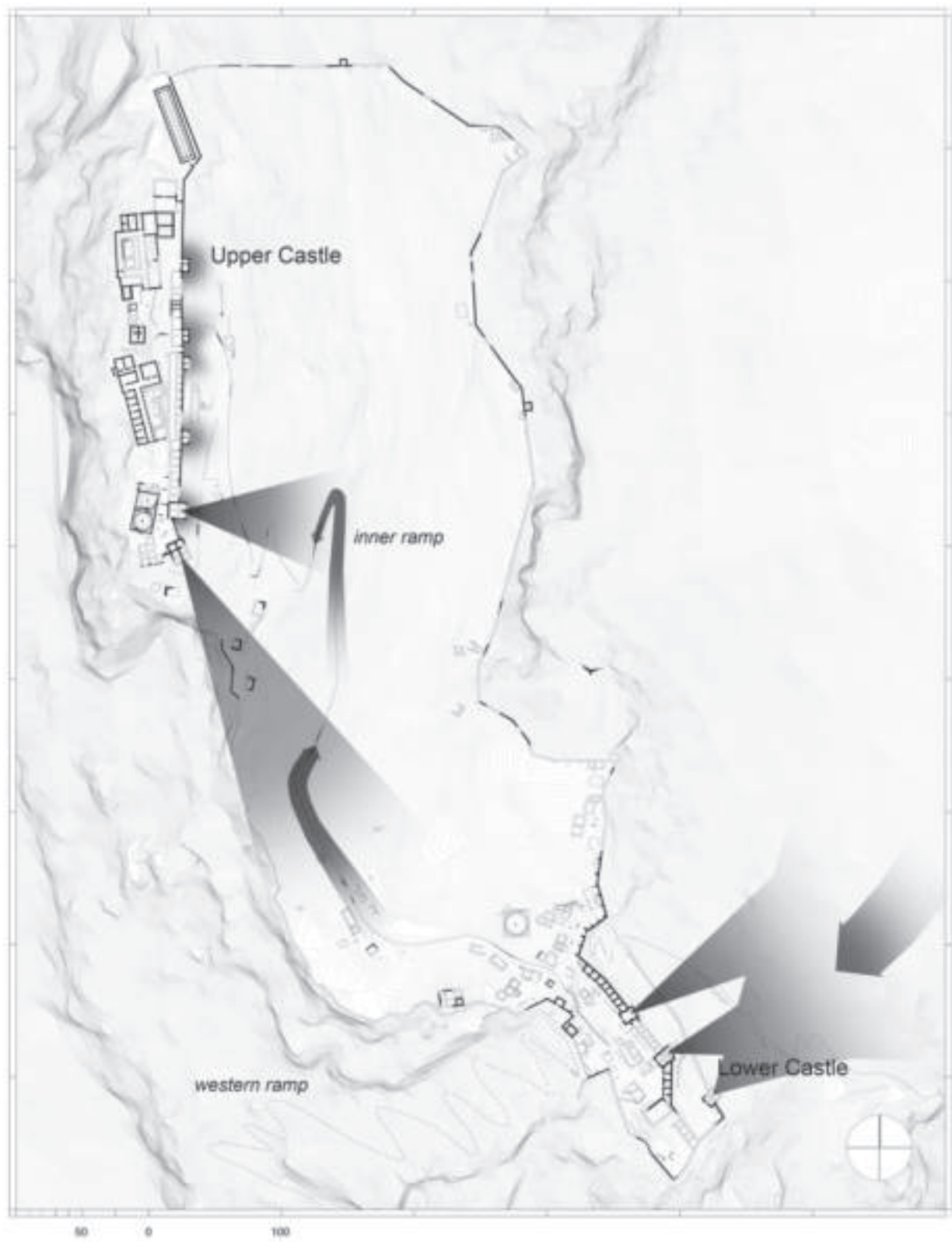


Fig. 1 Karasis – overall plan with ways of attack and the fields of fire of the large artillery towers (T. Radt).

and a long row of two-storeyed casemates behind. While the former was only up to 6 m high, the outer curtains of the latter were at least 10 m high. To provide quick and easy movement on the wall-walk, a row of short stretches of wall was probably placed behind the *proteichisma*. On these were laid wooden beams to broaden the wall-walk. A similar system was installed on the casemates. Thus there was space for a greater number of defenders (Fig. 2). The system was completed with three large towers. One stood at the southern end of the *proteichisma*. The other two separated the three northern casemates from each other (Fig. 1). All three had a similar inner structure. Their pre-eminent characteristic is one large single room, which can be reconstructed under the topmost platform of each tower. On the northern side of each of these rooms a large window faced the wide slope mentioned above. These apertures can only be interpreted as artillery windows. Judging from the rooms' sizes and the windows' position each tower housed one stonethrower that could throw balls of 30 mines (=13 kg) in weight.¹⁰ Hence it is obvious that the planners blocked the only way up and tried to prevent the enemy from approaching by artillery fire from a distance (Fig. 1).

THE UPPER CASTLE

The Upper Castle's ruins form a 300 m long ensemble that stretches out on the highest ridge of the mountain at an altitude of 1040 m (Figs 1 and 3). Along its western flank there are very high rocky cliffs, so this side was not fortified at all. Opposite on the eastern flank there was a long straight wall. It was flanked by a series of six towers. The four northern towers can be characterized as simple flanking towers, which stood at right-angles with and in front of the adjacent curtain-walls.

In contrast the two southern towers were artillery-towers that followed the pattern of the three artillery towers in the Lower Castle. Instead of facing the east, as the other towers did, the southernmost tower faced south-east. Its axis focused on a long straight part of the so-called inner ramp that led up from the main gate to the Upper Castle's gate (Fig. 1). The other southern tower aimed at the serpentines that the inner ramp followed across the southern part of the slope (Fig. 1). Thus it can be concluded that the planners expected an enemy to advance only over the inner ramp and that they again tried to prevent this with heavy artillery fire.¹¹

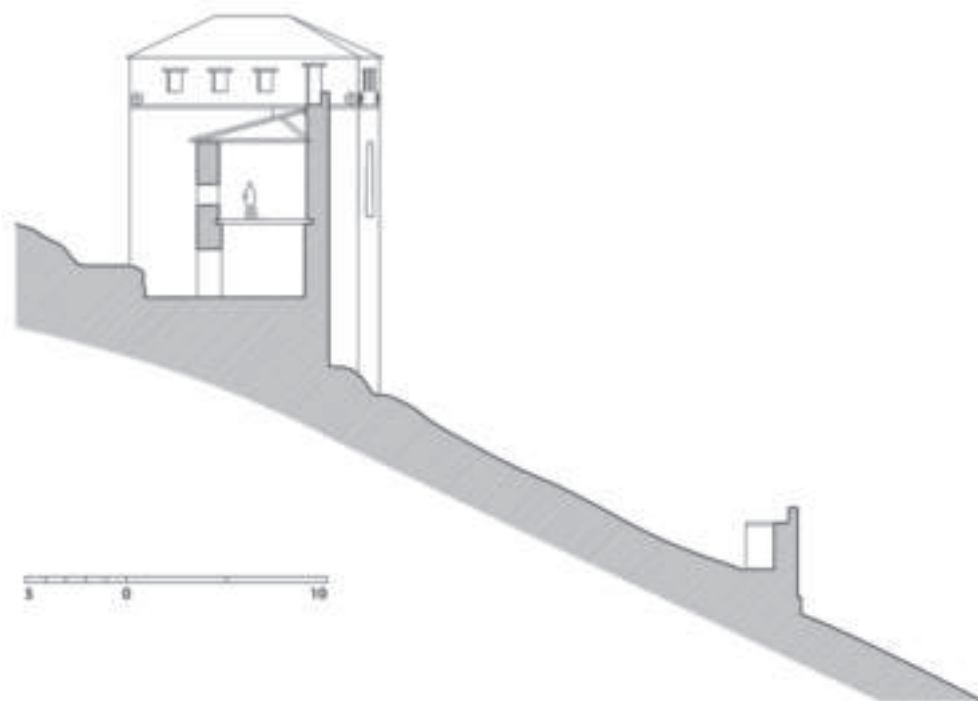


Fig. 2 Karasis, Lower Castle – section of the fortifications on the northern flank (T. Radt).

¹⁰ This interpretation is based on the measurements given by Marsden; see Marsden 1969, 34–6.

¹¹ The dimensions of the tower on the south-eastern corner of the Upper Castle are 17 m × 14 m which suggests that it housed a catapult that was even larger than the 30 mines' stone-throwers of the other artillery towers.

If the enemy managed to cross the fields of fire, a direct attack led from the last straight part of the inner ramp on the Upper Castle could be fought back from the curtain-walls and the flanking towers (Fig. 1).

INNER STRUCTURE OF THE UPPER CASTLE

As described the concepts for fortification of the Lower and Upper Castle's seem to have been pragmatic in every respect. However, it would be not sufficient to end the analysis at this point. To understand the coherence thoroughly it is necessary to take a look on the inside of the Upper Castle.

In the south there were only two large cisterns and a simple casemate-building. This area was obviously designed for servicing functions. It was not accessed through the Upper Castle's main gate, but through a smaller gate between the two large towers at its southern end (Fig. 3). Further north there were two courtyard-houses – the Banquet Building and the Residence Building. Separated from the Residence Building by a large tower, an elongated granary building lay in the far north (Fig. 3).

The Banquet Building and the Residence Building are of special interest. Both had many features in common.

1. The main entrance was in the north in both cases, through a corridor that led to a covered walkway, which surrounded the inner courtyard (Fig. 3). Both courtyards were not peristyles in the common Hellenic sense; instead of colonnades there seems to have been only a row of windows.
2. Each of the houses had a great hall in the north-east (Fig. 3).
3. Each of the houses included a specifically organized unit of four rooms in the south, which is likely to be interpreted as a kind of kitchen suite (Fig. 3).

Taken together these details prove that the structures of the two buildings were of a courtyard type: houses with a peristyle, many of which are known from contemporary Hellenic urban contexts outside of Cilicia.¹² Thus it is obvious that both houses fulfilled similar, representative functions. However, there were two important differences: firstly the Residence Building lay on a level 14 m above the one of the Banquet Building and secondly the Banquet Building was easily reached directly from the gate, while

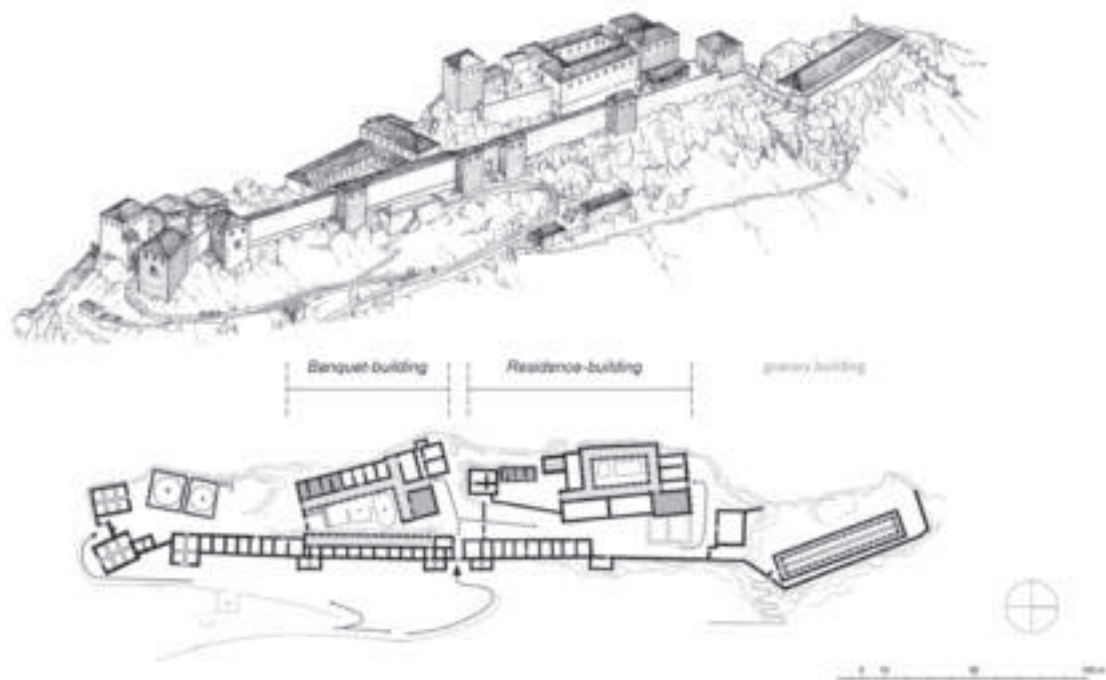


Fig. 3 Karasis, Upper Castle – above: reconstruction, below: schematic plan (T. Radt).

¹² For general information on courtyard houses see Hoepfner 1998 and others, e.g. Nevett 2001.



Fig. 4 Schematic comparison of the Upper Castle on Mount Karasis (left, T. Radt), the House of Dionysos in Pella (middle, T. Radt after I. Nielsen) and the palace of Demetrias (right, T. Radt after P. Marzloff).

the entrance of the Residence Building lay far away from it in the north of the Upper Castle (Fig. 3). Thus a guest entering the Upper Castle would immediately understand how to access the Banquet Building, but he would not understand how and from where to reach the Residence Building. This indicates that the Banquet Building was a complex meant for public uses – for meetings, assemblies, feasts, etc. – while the Residence Building was the more ‘private’ area, belonging, perhaps, to the master of the fortress.¹³

All in all we observe a strict subdivision of the complex into three zones. Exactly the same subdivision can be

found in the famous so-called House of Dionysos at Pella in Macedonia (Fig. 4), a representative city-house.¹⁴ Accordingly the Upper Castle must have served a similar purpose. Thus there is every reason to not only talk of a fortress but of a heavily fortified residence, if not of a fortified palace.

ASPECTS OF DESIGN

Regarding non-fortified palaces in urban contexts, it is generally accepted that they not only took an elevated position opposite the adjacent city but that they presented a broad and richly decorated façade against

¹³ This interpretation corresponds with the appraisal of several scholars on palatial architecture in the course of the Hellenistic period, a time when – under oriental influence – the old Macedonian notion of the king as *primus inter pares* moved towards a personal, somewhat absolute form of monarchy. Regarding rulers’ palaces, Bernd Funck argues that a spatial distance between ruler and subjects had become the most important external, visual sign of power as it mirrored the basic internal structure of monarchy. He furthermore states that court etiquette allowed no one to see the king directly. Decisions were communicated via messengers. As a demonstration of his extraordinariness the king was not to be seen frequently. Instead, he should appear unattainable, implying his invulnerability. In order to obtain both this kind of distance and sufficient safety for the king, the palaces were fortified on the outside, but the roads and paths inside the palace complex were not straight and direct but twisted and turning, see Funck 1996, 44–5.

As Miltiades Hatzopoulos commented ‘It is obvious that such a palace on the acropolis, separated from the rest of the town by strong walls and towers, is the extreme opposite of the Macedonian palaces of Aigeai and Pella, integrated as they are into the urban tissue of the two capitals.’ See Hatzopoulos 2001, 192.

¹⁴ This house is mentioned in many publications e.g. Nielsen 1994, 85–7 and Lauter 1986, 330–1.

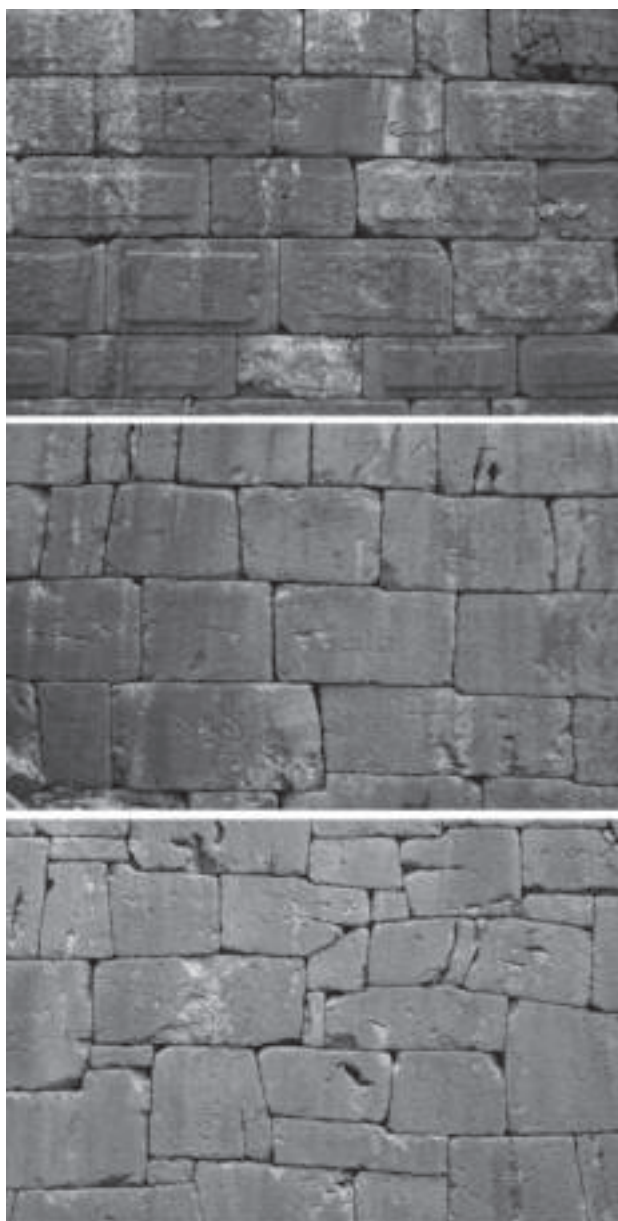


Fig. 5 Masonry on Mount Karasis – above: towers of the Upper Castle, middle: curtain-walls of the Upper Castle, below: curtain-walls of the Lower Castle (T. Radt).

the latter too. During the way up the palace's impressive prospect could be experienced from different angles.¹⁵ Regarding the relation of the inner ramp and the Upper Castle's eastern flank, it suggests itself that the latter functioned as a façade in the way described above.

This view corresponds in particular with the regular arrangement of the towers, which differs from the specific alignment of the one tower at the Upper Castle's south-eastern corner and also that of the three towers in the north of the Lower Castle. It is to be assumed that this contrast caught the viewer's eye from a great distance, but also when coming nearer there were significant differences to be noticed: the walls of the Lower Castle – especially on its northern flank – show masonry that resembles polygonal masonry (Fig. 5).¹⁶ Its structure is in particular characterized by a strongly differing size and form of the smoothened stones.

By contrast, the mantle of the Upper Castle's curtain-walls consists of blocks that tend to a rectangular format and that are laid in long, almost even running courses. Here, the surface of the blocks is accurately smoothened too (Fig. 5).

The masonry of the Upper Castle's towers is again different. With only one exception their masonry is accurately finished rusticated ashlar (Fig. 5). As the curtain-walls and the towers' walls are joined together precisely it is obvious that this difference of finish cannot be explained with two construction phases. Instead it is clear that the different masonries were deliberately chosen for the character they lent to each part of the fortifications by means of aesthetics and hierarchy. According to its status the techniques that required greater efforts were almost exclusively reserved for the Upper Castle.¹⁷ The rusticated ashlar of its towers' walls obviously should enforce the rhythm of the façade on its eastern flank (Figs 3 and 8). Thus it is to be seen as a subtle means of design that particularly was noticed from a shorter distance.

THE ROLE OF THE RESIDENCE BUILDING

Rusticated ashlar does not only appear in the towers of its eastern flank but also inside the Upper Castle. Aside from the granary building it is present on several parts of the Residence Building.

By contrast the ruins of the Banquet Building and the working quarters at the Upper Castle's southern end do not show any rustication at all. This distribution is surely not incidental. Instead – and again – it can be explained

¹⁵ Nielsen 1994, 81, 94–5; Hatzopoulos 2001, 191.

¹⁶ For the construction techniques on Mount Karasis see Bachmann in Hoffmann & Sayar 2007, 396–7; Radt 2009.

¹⁷ Outside the Upper Castle the only building that is entirely covered with rusticated ashlar is a small flanking tower to the north-west of the Lower Castle.

as a deliberate expression of the status and importance of these buildings. With regard to the granary building, which is obviously mainly a functional building, such an interpretation does not seem fit at first glance. In general granary buildings were, however, important elements of palatial structures as will be explained below. But it is clear that the Residence Building was important in every respect. Against this background one should expect that rustication would have been attributed to all of its parts but they are only present at the eastern front of the great hall in the north-east and the probable kitchen building together with the adjacent tower to the south (Fig. 3). However, a close analysis of the remains reveals that the original plan was to have rustication across the whole of the Residence Building's eastern front. Thus the entire complex would have had a well-fortified appearance. Actually the Residence Building incorporated one building with the characteristics of a fortification. This is the tower south of the kitchen building of which there are only few remains. At first glance its dimensions and plan resemble the artillery towers at the south of the Upper Castle and the northern flank of the Lower Castle. But in fact it cannot have fulfilled any purpose as a fortification as it stood behind the defensive wall and did not have any strategic importance (Fig. 3). Another interpretation is far more convincing: at a closer look it becomes apparent that the tower's ground-floor chambers – contrary to those of the artillery towers – differ in size and proportion. Furthermore they are linked by a special sequence of doors. This arrangement, and the tower's proximity to the courtyard complex, suggests it is most probably to be seen as a residence tower.¹⁸ One important point in favour of this hypothesis is that – as already mentioned – the Residence Building constituted the 'private' area of the ruler of the fortress. Furthermore the tower stood at the highest position of the whole site and as it stood at the axis of the entrance to the Residence Building the route up found its destination at the tower (Fig. 3). Therefore this tower can be seen as a perfectly orchestrated symbol of lordship and power.

Comparisons

Hellenistic palaces have frequently been the object of intense scientific research over the last twenty years or so.¹⁹ Within these works the question of whether palatial fortifications also fulfilled a semantic function has been discussed only in passing. The reason for that might be that there are only very few examples of fortified Hellenistic palaces, and often only written evidence of such ensembles.²⁰

In places where there actually are remains, the ruins of the fortifications are scarce. Making matters worse there is no other example where the fortifications are comparable to those of the Upper Castle. Nor can such a stringent deployment of artillery be observed, nor is there any section in which the fortifications form a regular façade comparable to the Upper Castle's eastern flank. Elsewhere building techniques and masonry are homogeneous.

Only the granary building with its position at the northern end of the Upper Castle finds parallels. In Pergamum there were no less than five buildings of similar size, shape and function just to the north of the palace²¹ and at the so-called citadel of Jebel Khalid in northern Syria, the situation seems similar too (Fig. 6).²² Furthermore, there are ancient written sources mentioning large granary buildings that were incorporated in the fortified palace of the tyrants Agathokles and Hieron II on the peninsula of Ortygia in Syracuse.²³ Accordingly granary and arsenal buildings seem to have been a basic element of Hellenistic palatial structures.

However, this knowledge does not help in putting the rest of the Upper Castle's fortifications into context. In fact only through intense research and fortunate coincidence have two other palatial objects been discovered that show parallels to the Upper Castle on Mount Karasis.

¹⁸ The most important comparison for such a residence tower can be found at Olba-Diocaesarea in Western Cilicia, see Wannagatt 2011, 260–4.

¹⁹ E.g. Nielsen 1994; Hoepfner & Brands 1996; Nielsen 2001; and Strootmann 2007.

²⁰ For example in Antioch, a fortified palace was built outside the city under Seleukos II (Plut. Demetr. 50.1–2). Unlike the famous summer-residence of Daphne, south of Antioch this palace was fortified and can therefore be understood along the same lines as Karasis. However, the precise location of this fortified palace remains unknown, and no further conclusions can be drawn, see Nielsen 1994, 65, 115.

²¹ For the arsenal buildings in Pergamum see W. Radt 1999, 76–7 and Boehringer & Krauss 1937.

²² Here, Australian archaeologists excavated a Hellenistic palace in the citadel's centre. By analysing aerial photos they detected a long building in the far north of the citadel, separated from the palace itself, which they did not excavate and the function of which they could therefore not determine precisely. As the granary building on Mount Karasis and the arsenal buildings on the acropolis of Pergamum are also separated from the 'palace' but still located in its immediate vicinity within the fortification walls, and as all buildings seem to have a similar size and shape (Fig. 6). I would define the elongated structure in the north of the citadel of Jebel Khalid as a granary or arsenal building; Clarke 2002, 25–48.

²³ Livius (Liv. 24.21) describes that these were surrounded by fortification walls and located close to the palace; see Lehmler 2005, 121.

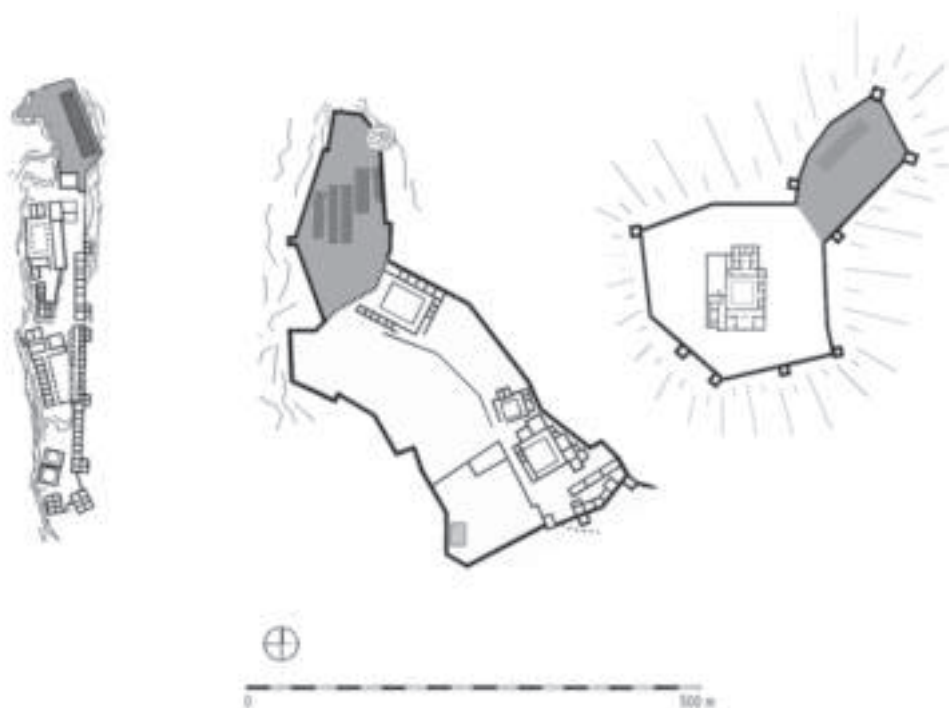


Fig. 6 Schematic comparison of the Upper Castle on Mount Karasis (left, T. Radt), the acropolis of Pergamum (middle, T. Radt after W. Radt) and the citadel of Djebel Khalid (right, T. Radt after G. Clarke).

DEMETRIAS

Between 1968 and 1981 on a hill in the city centre of ancient Demetrias in Thessaly, the remains of three palaces that succeeded each other were excavated.²⁴ The last palace can be dated around 200 BC. Most probably it was erected under Philip V of Macedon.²⁵ This palace formed a rectangle c. 200 m × 60 m in dimension. It stretched from east to west and its axes were aligned on those of the grid of the city streets.²⁶ The palace was divided into three parts. On the highest point in the east there was a two-storeyed courtyard complex, which had a large square tower at each corner. This massive complex is usually known as the 'Anaktoron'.

West of it – on a lower level – there was a large courtyard, which was surrounded by a covered walk way to the south, east and west while in the north there was an elongated building. In the middle of the courtyard the pedestal of a monument was found (Fig. 4). Further west there was a third courtyard, on the northern side of which the excavators found a large elongated building, which they interpret as 'functional building' (Fig. 4).²⁷ The excavations reveal that no towers stood at the corners of the two western courtyards.

The overall arrangement described above is clearly reminiscent of both the Upper Castle on Mount Karasis and the House of Dionysos in Pella: the division of the palace into three parts can be observed in all three cases and the linear alignment of the specific buildings is very similar. The large 'functional building' the western forecourt can be seen as equivalent to the working quarters in the south of the Upper Castle and the House of Dionysos. Furthermore, the middle courtyard with a central monument suggests that it had a somewhat representative character. At least the main entrance lay on its south-eastern corner, like the entrances to the Upper Castle and the House of Dionysos lay on the north-eastern corner of their middle parts (Fig. 4). Finally the Anaktoron and the Residence Building of the Upper Castle were both situated at the highest position of the site. Moreover, both appeared well fortified to the outside, while the rooms inside almost exclusively served representative and residential purposes. Therefore it is concluded that the function of the towers of the Anaktoron was mainly symbolic, just as the one of the tower to the south of the Residence Building on Mount Karasis was.

²⁴ For a general overview see Marzloff 1996.

²⁵ Marzloff 1996, 156–7.

²⁶ Marzloff 1996, 149–50.

²⁷ Marzloff 1996, 158.

TEKE KALE

The second comparison is located in the ruins of Teke Kale in Caria, about 10 km north of the ancient city of Alinda, which were first described by Paton and Myres in 1896, who also drew the first plan.²⁸ No research has taken place since then. In modern publications the ruins are described as ‘fort’, ‘garrison’ or ‘signal station’.²⁹ A representative function has up to now only been cautiously assumed with regard to the numerous tombs by which the ruins are surrounded, yet not by the architectural design of the site itself.³⁰

Like the ruins on Mount Karasis, Teke Kale stands on a high peak far from any known ancient settlement. Most of the walls still stand to a height of at least two metres. Thus the site’s overall plan is clearly visible (Fig. 7). Judging from the masonry the site was probably erected in the 4th or early 3rd century BC.³¹

In the centre on the highest point there are the remains of a rectangular complex with an inner courtyard. On the north-western corner of this complex there are the ruins of a strong square tower (Fig. 7). West of the complex,

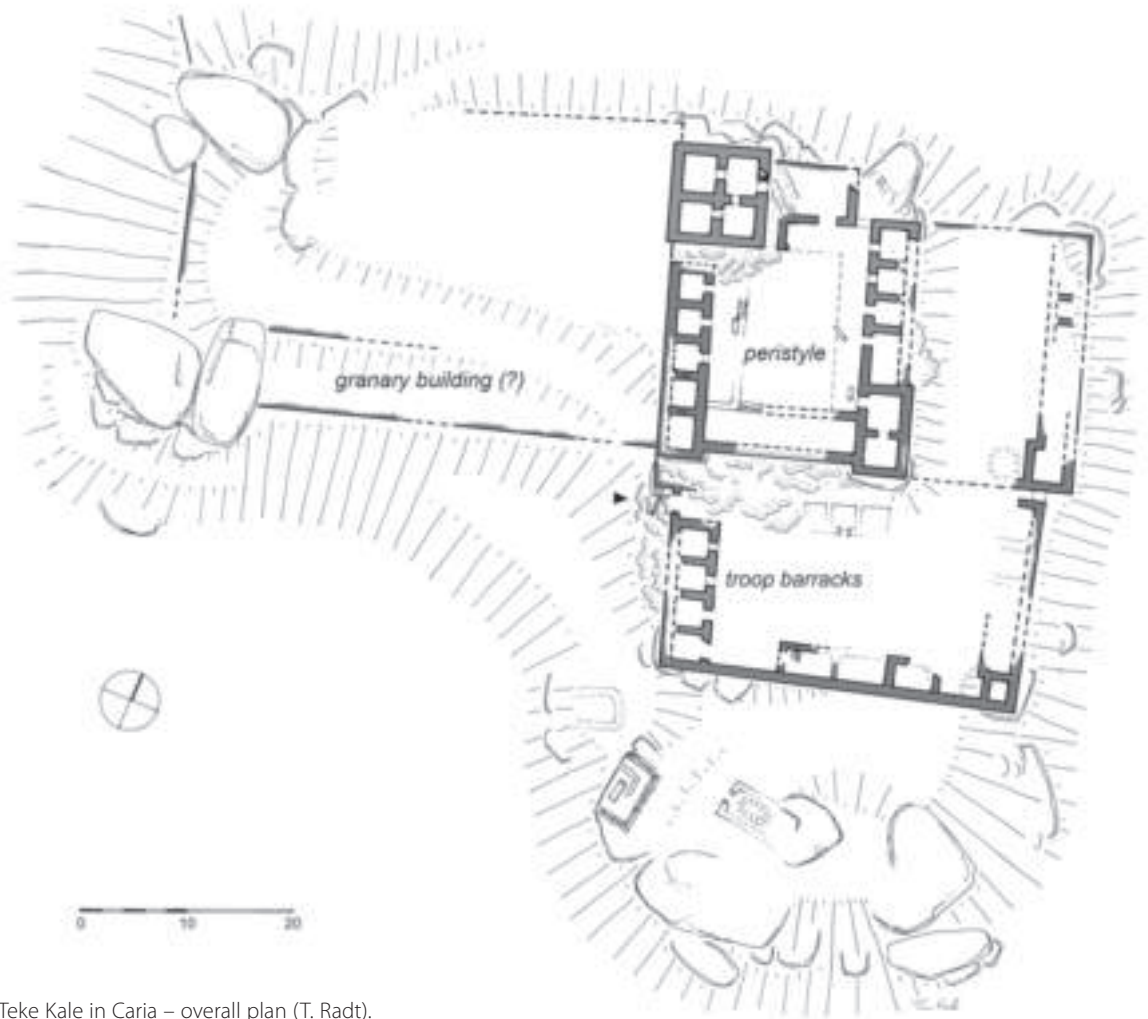


Fig. 7 Teke Kale in Caria – overall plan (T. Radt).

²⁸ Paton & Myres 1896, 240 fig. 13.

²⁹ McNicoll & Millner 1997, 41; Pimouguet-Pedarros 2000, 131, 310–13.

³⁰ McNicoll & Millner 1997, 41.

³¹ The masonry is alternate header and stretcher, which is characteristic of Hellenistic fortifications of the Latmos region. The most famous example is the city walls of Heraclea near Lake Bafa. Similar techniques can be seen at the city walls of Alinda and Alabanda, the so-called acropolis of Labranda, but also at several small fortresses in the region; see Karlsson 1994, 141–53; McNicoll & Millner 1997, 15–45; Vergnaud 2014.

there is a large forecourt in which only the remains of one elongated building have been found. Moreover – on a lower level – there are two other forecourts to the south and east of the central complex. Along the western and southern flanks of the first and along the eastern flank of the latter there are the remains of simple elongated buildings (Fig. 7).

As there are several monolithic column shafts lying on the ground no intense survey is needed to interpret the courtyard of the central complex as a peristyle. This evidence alone clearly shows that Teke Kale cannot have been a fortress in an exclusively military sense. Further aspects confirm this view. First, the large square tower seems to be the only element with the characteristics of a fortification. However, with its position at the north-western corner of the central complex it could not provide flanking fire for the adjacent northern curtain-walls. Furthermore even

from its top the relatively smooth eastern, southern and western flanks of the mountain could not be observed and aimed at with missiles as the buildings and walls of the forecourts stood in the way. Last but not least a purely military function of the tower would contradict the representative character of the peristyle. Instead the combination of the two suggests that the tower fulfilled the same symbolic purposes as the one to the south of the Residence Building on Mount Karasis obviously did.

On the southern side of Teke Kale's central complex the outer wall does not just run from one corner to the other, instead it forms two *avant-corps*, one at each end (Fig. 7). Obviously this corresponds with the depths of the western and the eastern wing and the fact that the two southernmost chambers in these wings are the only ones that are crosslinked with each other. Judging from this evidence it is probable that there was a tower-like block at the southern end of each wing (Fig. 7). Without doubt

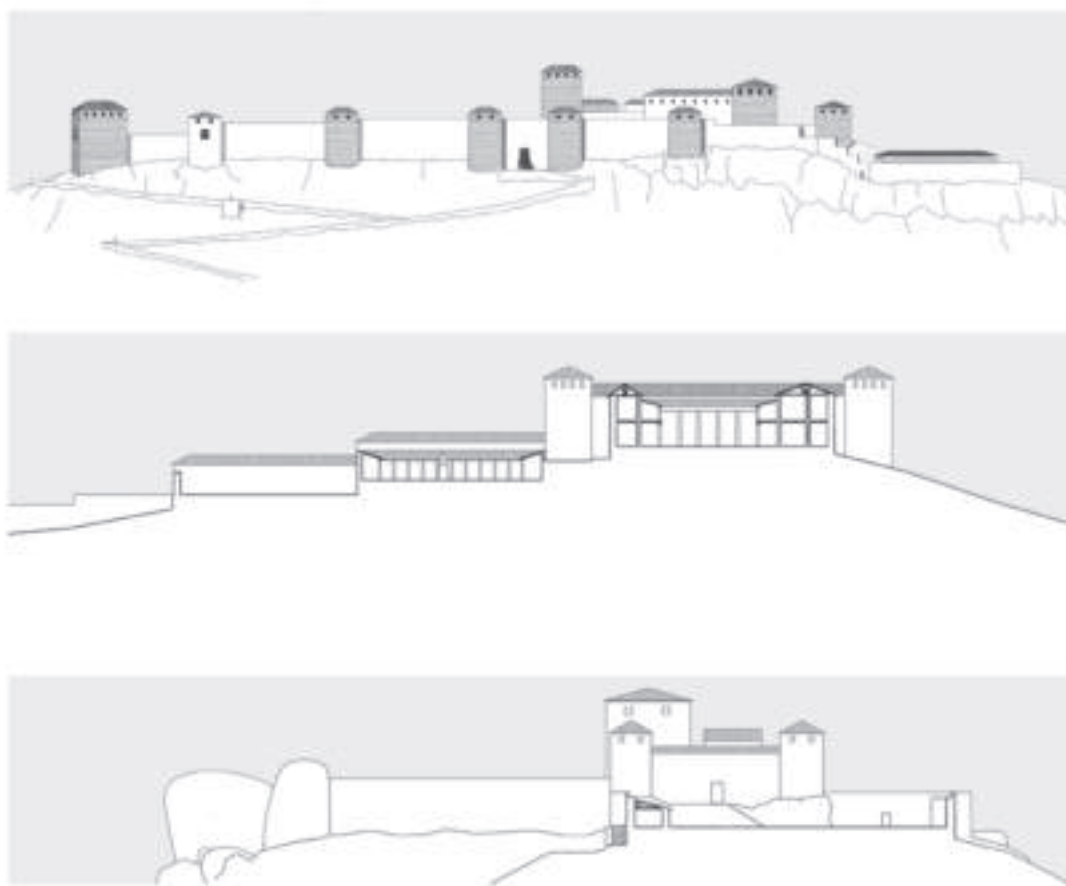


Fig. 8 Schematic reconstructions of the Upper Castle on Mount Karasis (above, T. Radt), the palace of Demetrias (middle, T. Radt after P. Marzloff), Teke Kale (below, T. Radt).

these elements were planned in order to symmetrically frame the entrance to the peristyle instead of reacting on the need for fortification. Most likely, together with the large tower, these blocks or towers formed a crown that set apart the central complex from the forecourts. This arrangement is reminiscent of the Anaktoron in Demetrias (Fig. 8).

With reference to Mount Karasis and Demetrias all other parts of Teke Kale can be hypothetically interpreted: on the one hand the western forecourt was accessible only from the peristyle just as the granary building on Mount Karasis was only reached from the northern part of the Upper Castle, which incorporated the Residence Building. Regarding this parallel the single large building in the Teke Kale forecourt is most probably to be seen as granary or arsenal building too.

On the other hand the systematic row of chambers to the south of Teke Kale's main gate seems to have been used for housing troops. Furthermore there are the remains of an oil-mill inside the building on the southern flank of the southern forecourt suggesting that it was a simple functional building (Fig. 7). Therefore a non-representative character can be attributed to the southern forecourt.

Teke Kale's eastern forecourt is on the same level as the southern forecourt. There is no evidence to suggest the purpose of the elongated building on its eastern flank and nothing points to its having had a somewhat higher status than the southern forecourt. But it is obvious that the two forecourts were separated from each other by a wall suggesting that they served different functions (Fig. 7). Therefore, most probably the eastern forecourt can be understood as equivalent to the Banquet Building on Mount Karasis and the middle courtyard with the monument at Demetrias (Fig. 4). Accordingly Teke Kale as a whole can also be characterized as a fortified residence or palace.

Summary and outlook

The fortified palace on Mount Karasis cannot be seen as an isolated phenomenon. As shown, its structure

and organization find parallels in several respects and in several places. Although the number of comparisons is rather small, the concordances are clear enough to suggest that the Upper Castle followed a pattern that was common throughout the Hellenized regions of the Mediterranean at least during the 3rd and 2nd centuries BC.³²

In general the basic characteristics of this pattern are: first a strict division into three zones of function; these were arranged in a line and had similar dimensions, which helped to create one or several regularly designed façades. Obviously the functions were (1) working quarters, (2) a kind of reception area or an area where company was received and (3) an area that mainly served as residence for the ruler and that was accessible only for certain people. The status of the latter was emphasized by the high position of the buildings and/or an extraordinary construction height. Moreover it incorporated buildings that had the character of a fortification, or the whole section was presented as well fortified. In its immediate vicinity granary or arsenal buildings were placed. These buildings were enclosed by walls, which joined with the enceinte of the palace. This arrangement allowed the ruler to gather and directly control important supplies, such as food and weapons. Due to their size and the importance of the goods stored inside them, such buildings were seen as a symbol of prosperity and therefore emphasized the ruler's dominance.

However, there are some significant differences between the Upper Castle on Mount Karasis, Demetrias and Teke Kale. In particular, the latter two had a regular overall plan while the Upper Castle's inner structure appears to have been relatively unsystematic. Here, mainly the eastern defence line with its row of towers fulfilled the need for regularity and unified the ensemble. Furthermore, the distinction of curtain-walls and towers by different masonries is only present at the Upper Castle. Thus we see that the pattern outlined above was not hard-and-fast in every respect and allowed individual variations. Further research will show to what extent the pattern helps to understand the complex situation on the so-called *Burgberg* of Pergamum, which cannot be interpreted satisfactorily to date.

³² The palaces of Djebel Khalid and of Dura Europos did not follow this pattern because they were erected under oriental influence; see Clarke 2001, 244–5.

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ZUR SEMANTISCHEN FUNKTION DES BOGENS IM STADTTORBAU. EIN VERGLEICH ZWISCHEN REPUBLIKANISCHEN UND HELLENISTISCHEN STADTTOREN

Jessica Böttcher-Ebers

Zusammenfassung

Anhand des veränderten Einsatzes des Bogens in der Architektur der Stadttore soll der Wandel des ehemals defensiven Charakters der Stadttore hin zum visuellen Zeichen nachvollzogen werden. Um die Semantik des Bogens aufzeigen zu können, werden griechisch-hellenistische und republikanische Stadttore einander gegenübergestellt.

Der Einsatz des Bogens wird hierfür hinsichtlich seiner formalen, konstruktiven und visuellen Funktion untersucht. Lassen sich Verschiebungen zugunsten einzelner Funktionen festmachen? Inwieweit veränderte dies die Symbolik des Bautypus? Welche Intention verfolgten die Auftraggeber dieser Architekturen? Wie lassen sich diese mit dem jeweiligen Erscheinungsbild der Stadttore in Verbindung bringen?

Außerdem wird ihre zunehmende Einbindung in das Stadtgefüge untersucht. Welche urbanistische Funktion übernahmen die Stadtzugänge, sind Bezugsachsen feststellbar?

Der Vergleich zwischen ausgewählten republikanischen und griechisch-hellenistischen Stadttoren veranschaulicht den unterschiedlichen Umgang mit dem Architekturelement Bogen. Im Kontext seiner Entwicklung zum Fassadenelement in der römischen Architektur der späten Republik fand eine neue ästhetische Bewertung statt. Diese spiegelte sich auch im Stadttorbau wider, lässt sich bei den zeitgenössischen griechisch-hellenistischen Vertretern jedoch nicht feststellen.

Mit dem Aufkommen der Bogenkonstruktion fand sie auch Eingang in die Architektur der Befestigungsanlagen und wurde in deren Außenansicht sichtbar. Daraufhin erfuhr der Stirnbogen verschiedene Formen der visuellen Akzentuierung. Schlussendlich verlor sich die funktionale Verbindung zwischen Tonnengewölbe und Stirnbogen vollständig. Der Bogen wurde auf diese Weise zum Fassadenelement. Seine Semantik übertrug sich auf die urbanistische Funktion des Stadttors als räumliche Zäsur. Durch die Verwendung des Bogens und damit einer Leitform der spätrepublikanischen Architektur entwickelte sich das Stadttor von einem Militär- zu einem Repräsentationsbau.

Verteidigungsanlagen besitzen eine defensive Funktion. Sie sollen das umgebene Areal durch hohe Mauern, unbezwingbare Turmanlagen und die Undurchdringlichkeit ihrer Zugänge vor der Inbesitznahme während eines militärischen Angriffes schützen. Was aber, wenn die Verteidigungsfunktion in Friedenszeiten ausbleibt und damit ihre ursprüngliche Funktion hinfällig wird? Wie wandelte sich das Bauensemble Stadtbefestigung von der Militärarchitektur zur städtischen Architektur und welche neuen Funktionen waren damit verbunden?

Während Mauern und Wehrtürme in Friedenszeiten funktional nahezu bedeutungslos wurden, behielten vor allem die Stadttore eine wichtige Funktion. Sie blieben die Passage zwischen Stadt und Umland und markierten auf diese Weise eine räumliche Zäsur innerhalb der Stadtmauer.¹ Ihr Zweck bestand jedoch nicht mehr vorwiegend darin, den Zugang möglichst gut verhindern zu können, sondern sie sollten ihn vielmehr gewährleisten. Dies hatte umfassende Auswirkungen auf das Erscheinungsbild der Stadttore.

Bauliche Veränderungen an den Stadttoren

Die allgemeinen baulichen Veränderungen, welche für eine zunehmende zivile Wahrnehmungsweise der Stadttore sprechen, waren sowohl bei der Entwicklung der griechisch-hellenistischen als auch derjenigen der zeitgenössischen republikanischen Befestigungen ähnlich. Eine wichtige Neuerung bestand vor allem in der Vergrößerung der Durchgangsbreiten, welche erst den Einsatz des Bogens erforderlich machte. Später kam das Hinzufügen von weiteren Durchgangsmöglichkeiten hinzu.² Die ehemals enge Passage innerhalb der Stadtmauer erfuhr somit immer mehr eine Öffnung für den Durchgangsverkehr.

Neben den baulichen Veränderungen ist besonders die Ausgestaltung des Stadttors mit Fassadenelementen ein Indiz für die veränderte Wahrnehmungsweise des Bautypus. Dies kann grundsätzlich gleichsam für die griechisch-hellenistischen Vertreter wie auch für die republikanischen Vertreter festgestellt werden. Ab dem beginnenden 3. Jh. v. Chr. wurden die Stadttore immer häufiger aufwendig gestaltet.

Allerdings unterschieden sich die jeweiligen Mittel der Ausgestaltung und ihre Semantik z. T. deutlich voneinander.

Dies kann am Beispiel des Architekturelements Bogen innerhalb der Stadttorarchitektur nachvollzogen werden.

Die bautechnischen Grundlagen der Verwendung des Bogens im Stadttorbau

Der Bogen kam seit dem ausgehenden 4. bzw. frühen 3. Jh. v. Chr. in der Baukunst Griechenlands, Kleinasien, der Magna Graecia, Etruriens und dem römischen Gebiet innerhalb verschiedenster Bautypen zum Einsatz.³ Schon kurze Zeit nach seiner Einführung wurde das Architekturelement auch im Stadttorbau verwendet, z. B. bei den besonders frühen Vertretern in Herakleia am Latmos⁴ und Falerii Novi.⁵ Dabei war sein Einsatz zunächst konstruktiv bedingt. Der Bogen ermöglichte erweiterte Durchgangsbreiten. Er konnte durch seine Wölbung und die daraus resultierende Druckableitung im Gegensatz zum horizontalen Architekturelement besonders große Öffnungen im Mauerwerk überspannen. Die Gewährleistung einer hohen Drucklast war vor allem bei sehr hohen Stadtmauern⁶ bzw. der Mehrgeschossigkeit von Stadttoren bedeutungsvoll.⁷ Das Architekturelement hatte sich bereits bei der massiven Abstützung der Wehrgänge bewährt, die im Zuge der veränderten, schwer auf den Wehrmauern lastenden Waffentechnik

¹ Zu den verschiedenen Funktionsebenen des Stadttors im Mauerring: Schattner 2006, 11–3.

² Beispielsweise bei der Porta Venere und der Porta Consulare in Hisspellum: Brands 1988, Kat. 23.2.1 und 23.2.5, 129–31. 132–3.

³ Zusammenfassend zu den verschiedenen Theorien über die Herkunft der Bogenform: Dornisch 1992, 27–35.

⁴ Dornisch 1992, Kat. 22–8, 72–7.

⁵ Brands 1988, Kat. 19.2.1–2.2, 118–20; Dornisch 1992, Kat. 131–2, 188–9; Böttcher-Ebers 2012, Kat. 13–4, 106–8.

⁶ Ein gut erhaltenes Beispiel für ein besonders hoch aufgehendes Mauerwerk über einem Bogendurchgang ist die Porta del Bove in Falerii Novi: Brands 1988, Kat. 19.2.2, 119–20; Dornisch 1992, Kat. 132, 188; Böttcher-Ebers 2012, Kat. 14, 108.

⁷ Ein Beispiel für die Mehrgeschossigkeit: Perugia, Porta di Augusto: Brands 1988, Kat. 31.2.1, 164–7; Dornisch 1992, Kat. 141, 191–2 bzw. für das Vorhandensein der Wehrgänge: Ferentinum, Porta Sanguinaria: Brands 1988, Kat. 20.2.1, 122; Dornisch 1992, Kat. 143, 196; Böttcher-Ebers 2012, Kat. 16, 113–4.

notwendig geworden war.⁸ Es verursachte jedoch einen höheren Bauaufwand, weil der Bogen zunächst ausschließlich in der Steinsatzbauweise errichtet wurde. Jeder Wölber musste genau angepasst werden, dies erforderte qualifiziertes Baupersonal, erhöhte die Baukosten und verzögerte die Bauzeit. Während der Bogen im griechisch-hellenistischen Raum auch im 2. und 1. Jh. v. Chr. weiterhin ausschließlich in der Trockenbauweise zum Einsatz kam, wurde er im Stadttorbau der spätrepublikanischen Architektur seit dem ausgehenden 2., vor allem aber seit dem 1. Jh. v. Chr. auch in Opus caementicium errichtet.⁹ Somit veränderten sich nicht nur der erforderliche Bauaufwand, sondern ebenso die Belastbarkeit der Konstruktion und die formalen Einsatzmöglichkeiten des Bogens. Mithilfe einer Brettverschalung wurde ein Gemisch aus Kalk und Puzzolanerde in die vorgegebene Bogenform gegossen. Die aufwendige Errichtung des Bogens mittels aufeinander angepasster Quadersteine konnte so vermieden werden.¹⁰ Das Eigengewicht der Konstruktion war durch das Fehlen der massiven Quader wesentlich geringer geworden, zugleich konnte der Bogen durch das feste Abbinden des Zements einem wesentlich größeren Belastungsdruck standhalten. In der Außenansicht wurde die Verwendung des neuen Baumaterials nicht zwangsläufig sichtbar gemacht. Die Verschalung konnte vielmehr beliebig gestaltet werden: als Opus quadratum, so dass der Anschein eines aufwendigen Quadermauerwerks erweckt wurde, oder aber als Opus incertum bzw. Opus reticulatum. Letztere waren besonders kostengünstig anzufertigen, da sie in kleinteiligem, leicht zu transportierenden und zu bearbeitenden Material hergestellt wurden und sich daher vor allem für die Errichtung von Großbauten, wie beispielsweise der Portikus Aemilia in Rom, eigneten.¹¹

Für den formalen Einsatz des Bogens hatte die Einführung des Opus caementicium zur Folge, dass der Bogen, der zuvor im Steinsatz immer der Stirnbogen eines Tonnengewölbes gewesen war, nun in der neuen Bauweise losgelöst von einem dahinterliegenden Gewölbe zum Einsatz kommen konnte. Er war dadurch ohne einen erhöhten Bauaufwand an nahezu jeder beliebigen Stelle im Mauerwerk einsetzbar.

Die Sichtbarkeit des Bogens

Neben den verschiedenen bautechnischen Möglichkeiten bestand ein weiterer wesentlicher Unterschied zwischen den griechisch-hellenistischen und den spätrepublikanischen Stadttoren in der Erkennbarkeit der Bogenkonstruktion in ihrer Außenansicht.

Bei den griechisch-hellenistischen Stadttoren wurde das Bogenfeld oftmals vom Scheitel bis zum oberen Abschluss der Kämpfer mit Quadersteinen ausgemauert, so dass die Bogenform gar nicht wahrgenommen werden konnte. Der obere Abschluss des Durchgangs war demnach horizontal und eben nicht bogenförmig.¹² Genauso verhielt es sich bei den Vertretern der Stadttore, welche nur auf der Feldseite des Durchgangs mit einem Bogen überdeckt waren und auf der Stadtseite einen horizontalen Sturz aufwiesen oder umgekehrt.¹³ Bei den republikanischen Stadttoren lässt sich ein solches Vorgehen hingegen nicht feststellen. Der Bogen wurde auf der Feld- und Stadtseite sichtbar gemacht und war daher auch als gewölbte Form in der Mauerfläche evident.¹⁴

⁸ Namentlich der Einführung von Wurfgeschossen, zur daraus resultierenden Verbreiterung der Wehrgänge am Beispiel von Rhodos: Phil. *mech.* 5.80.17. Vgl. die erhaltenen Bogensubstruktionen in den Stadtmauern von Perge: Adam 1982, 39–40 und Side: Adam 1982, 39, 41.

⁹ Der früheste Einsatz von Opus caementicium bei der Errichtung von Bogenkonstruktionen kann bisher bei dem sog. Fornix von Cosa: Böttcher-Ebers 2012, Kat. 7, 97–9 und der Portikus Aemilia in Rom: Böttcher-Ebers 2012, Kat. 36, 164–6 um 175 v. Chr. nachgewiesen werden. Durch die starke Überbauung der servianischen Stadtmauer in Rom haben sich für die republikanische Zeit zwar keine Stadttore erhalten, aber die in Opus caementicium errichteten bogenüberwölbten Schießkammern aus der Bauphase des frühen 1. Jh. v. Chr. legen die Annahme des Einsatzes dieser Bautechnik auch für die zeitgenössischen Stadttore nahe. Zu den Schießkammern: Böttcher-Ebers 2012, Kat. 47, 180–3. Frühe Vertreter für die Verwendung von Opus caementicium im spätrepublikanischen Stadttorbau: Vielleicht sogar noch in das ausgehende 2. Jh. v. Chr. gehört die Porta Marina in Pompeii: Brands 1988, Kat. 33.2.4, 184–8 und in die 40er Jahre des 1. Jh. v. Chr. datieren die Porta Romana und Porta San Lorenzo in Aquinum: Brands 1988, Kat. 8.2.1–8.2.2, 98–9; Böttcher-Ebers 2012, Kat. 3–4, 90–2.

¹⁰ Zum Opus caementicium und seiner Bedeutung für die römische Architektur: Rakob 1983, 359–72. Ein Überblick über die Entwicklung der Bautechnik für die Bogenkonstruktion: Lugli 1957, 661–93.

¹¹ Vgl. Anm. 10.

¹² Vgl. Priene, Osttor: Dornisch 1992, Kat. 19, 69–71; Herakleia am Latmos, Tor 19 und 21: Dornisch 1992, Kat. 24 und 23, 74–5; Dura Europos, Südtor: Dornisch 1992, Kat. 39 a und b, 83–8; Assos, Tor 1: Dornisch 1992, Kat. 53, 103–4; Milet, Älteres Heiliges Tor: Dornisch 1992, Kat. 106, 153–5; Milet, Löwentor: Dornisch 1992, Kat. 109, 158–60. Dazu auch ausführlich: Böttcher-Ebers 2012, 22–6.

¹³ Vgl. Sillyon, Unteres Turmtor 4: Dornisch 1992, Kat. 80 a und b, 134–6.

Die Herausbildung des Bogenrückens als Voraussetzung für die visuelle Akzentuierung der Bogenkonstruktion

Die Ausbildung eines einheitlichen Bogenrückens kann als die wichtigste Voraussetzung für die Wahrnehmung des Bogens als Einzelform innerhalb des Mauerwerks bezeichnet werden, zugleich war sie die Voraussetzung für dessen dekorative Ausgestaltung.

Bei den spätklassischen Stadttoren der Befestigungsanlage von Oiniadai ging der Bogen durch die Unregelmäßigkeit des Bogenrückens noch formal in der umgebenden Polygonalmauerfläche auf (Abb. 1).¹⁵ Er wurde aus statischen Gründen verwendet, die Durchgangsbreite des Tores überstieg deutlich die der übrigen, mit Kragsteinbögen überdeckten Stadttore der gleichen Befestigungsanlage.¹⁶ Schon wenig später ist der einheitliche obere Abschluss der Wölber bei den Bogendurchgängen von Tor 21 in Herakleia am Latmos¹⁷ (Abb. 2) und dem Löwentor von Milet¹⁸ anzutreffen. Der Bogen war hier bereits als Einzelform in der Mauerfläche wahrnehmbar.

Obwohl sich bei den griechisch-hellenistischen Stadttoren der Übergang vom unregelmäßigen zum regelmäßigen

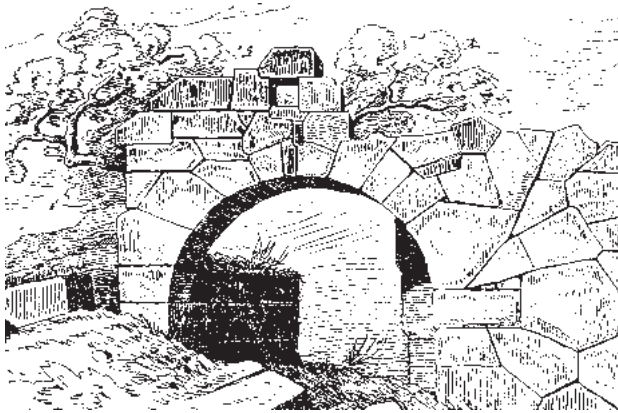


Abb. 1 Oiniadai. Stadttor, Stadtseite, unregelmäßiger Bogenrücken (Orlandos 1958, 339 Abb. 356).

Bogenrückens bereits früh verzeichnen lässt, führte dies in der weiteren Entwicklung zunächst zu keiner weiteren Hervorhebung des Bogens. Die Beispiele, welche von Dornisch und Lauter für einen frühen zeichenhaften Einsatz des Bogens im Stadttorbau herangezogen werden, sind sämtlich entweder in ihrer frühen Datierung oder in ihrer Rekonstruktion unsicher und können daher nicht als frühe Vertreter für den Bogen als Dekorationsform geltend gemacht werden.¹⁹ Dies gilt vor allem für die Stadttore von Milet und Side, aber auch für die innerstädtischen Torbauten, welche die Zugänge zu den hellenistischen Platzanlagen überspannten, beispielsweise in Priene, Xanthos und Pergamon.²⁰



Abb. 2 Herakleia am Latmos. Tor 21, Stadtseite, Bogendurchgang mit einheitlichem Bogenrücken (Krischen 1922, 14 Abb. 11).

¹⁴ Wahrscheinlich eine Ausnahme stellt hier das Nordost-Tor von Cosa, die Porta Romana, aus dem 2. Viertel des 3. Jh. v. Chr. dar: vgl. Brands 1988, Kat. 18.2.1, 114–7; Dornisch 1992, Kat. 124–130, 187–8; Böttcher-Ebers 2012, Kat. 6, 96–7. Dieses Stadttor ist jedoch aufgrund seiner Ausstattung mit einem Fallgatter, der Anlage der Wehrtürme, seinem urbanistischen Kontext und dem insgesamt sehr wehrhaften Charakter der Cosaner Befestigungsanlage als Bauwerk anzusprechen, dass vornehmlich wehrhaften Zwecken diente.

¹⁵ Powell 1904, 149–50.

¹⁶ Rathke 2001, 18–22, 43, 87.

¹⁷ Dornisch 1992, Kat. 23, 74–5.

¹⁸ Dornisch 1992, Kat. 109, 158–60.

¹⁹ In Bezug auf die griechischen Bogentore: Dornisch 1992, 254–5. Allgemein zur griechischen Gewölbekonstruktion: Lauter 1986, 61–2, 301–2.

²⁰ Dagegen zu den einzelnen von Dornisch und Lauter vorgetragenen, vermeintlich frühen Beispielen: Böttcher-Ebers 2012, 26–30.

Die Zuordnung des Bogens als Fassadenelement als eine griechische ‚Erfindung‘ geht gemeinhin von der falschen Annahme aus, dass der Bogen mit seinem ersten Auftauchen zugleich auch einen bewussten zeichenhaften Einsatz nach sich zog. Diese Interpretation basiert jedoch auf späteren Sehgewohnheiten und trennt die Entdeckung der konstruktiven und der visuellen Funktion des Bogens nicht voneinander.²¹

Bei den republikanischen Vertretern lässt sich hingegen eine sehr vielfältige und vor allem auch häufig dekorative Gestaltung des Bogens im Stadttorbau feststellen. Denn dort gab die Einführung des regelmäßigen Bogenrückens offensichtlich den Impuls für eine weitere Ausgestaltung des Bogens, die eine bewusst eingesetzte zeichenhafte Funktion nachweist. Diese visuellen Akzentuierungen waren auf die verschiedenen konstruktiven Bestandteile des Bogens bezogen.

DIE GESTALTUNG DES BOGENRÜCKENS

Der Bogenrücken erfuhr besonders früh eine Hervorhebung gegenüber der umliegenden Mauerfläche. Bei der Porta di Giove (Abb. 3) und der Porta del Bove, den beiden Stadttoren der im letzten Viertel des 3. Jh. v. Chr. errichteten Stadtbefestigung von Falerii Novi, wurde der Bogen durch eine hohe Profilierung seines Rückens plastisch von der ihn umgebenden Mauerfläche hervorgehoben.²² Damit wurde die Zäsur zwischen



Abb. 3 Falerii Novi. Porta di Giove, Bogendurchgang, Feldseite, Profilierung des Bogenrückens (J. Böttcher-Ebers).

dem horizontalen Quadermauerverband und dem gewölbten Durchgang betont. Weitere Vertreter für diese Akzentuierungsform befinden sich in Perugia. Sowohl bei der Porta Marzia, als auch bei der Porta di Augusto ist noch heute die Profilierung des Bogenrückens sichtbar. Beide Stadttore sind in die zweite Hälfte des 2. Jh. v. Chr. datiert.²³

Vermeintlich frühe Vertreter für die Profilierung des Bogenrückens, wie das Isthmische Tor von Korinth, waren sicher nicht von Anfang an mit dieser Form einer dekorativen Aufwertung des Bogens versehen.²⁴ Es handelte sich hierbei vielmehr um nachträgliche Veränderungen, welche die Stadttore nach dem Zeitgeschmack der römischen Eroberer ausstatteten. So sind beim Isthmischen Tor mit den Aussparungen an den Oberkanten der Keilsteine zwar mögliche Hinweise auf eine Profilierung vorhanden, gleichzeitig deutet aber die Form ihrer Anbringung eher auf eine nachträgliche Anbringung hin. Auch andere frühe Beispiele griechisch-hellenistischer Torbauten, die Merkmale der visuellen Akzentuierung des Bogens aufweisen, wie das Markttor in Priene, gehören neueren Untersuchungen zufolge ersten römischen Umbauphasen an und können daher auch nicht als Nachweis für eine frühe Verwendung des Bogens als Fassadenelement geltend gemacht werden.²⁵ Das Markttor von Priene wird beispielsweise noch bei Dornisch in die Jahre zwischen 150–130 v. Chr. datiert.²⁶ Kienlin konnte jedoch überzeugend nachweisen, dass es, ähnlich wie der Torbau am Südmarkt von Milet, nicht gleichzeitig mit der Anlage der Stoa zu datieren ist, sondern einer späteren, römischen Bauphase entstammt.²⁷

DIE GESTALTUNG DES BOGENLAUFES

Eine weitere Möglichkeit der visuellen Akzentuierung des Bogens war die Gestaltung des Bogenlaufes. Hier lassen sich für die Zeit der späten Republik zwei verschiedene Formen unterscheiden.

Die erste Form war der Einsatz eines Gurtbogens. Durch ihn wurde der Bogenlauf verdoppelt. Hierfür stehen stellvertretend die Bogendurchgänge der Porta S. Maria

²¹ Daher ein neuer methodischer Ansatz bei: Böttcher-Ebers 2012, 14–6.

²² Böttcher-Ebers 2012, Kat. 13, 106–7; Kat. 13, 108.

²³ Porta di Augusto: Brands 1988, Kat. 31.2.1, 164–7; Dornisch 1992, Kat. 141, 191–2; Porta Marzia: Brands 1988, Kat. 31.2.2, 167–70; Dornisch 1992, Kat. 142, 192–5.

²⁴ Dornisch 1992, Kat. 12, 54–6. Zur unsicheren Datierung des Tores: Böttcher-Ebers 2012, 24–5.

²⁵ Böttcher-Ebers 2012, 27; von Kienlin 1998–99, 254–5.

²⁶ Dornisch 1992, Kat. 159, 208–11.

²⁷ Vgl. dazu: von Kienlin 1998–99, 255.



Abb. 4 Ferentinum. Porta S. Maria, Stadtseite, Bogendurchgänge, Gurtbögen (J. Böttcher-Ebers).

in der Stadtbefestigung von Ferentinum (Abb. 4).²⁸ Das Stadttor wurde am Anfang des 1. Jh. v. Chr. im Zuge der Anlage einer neuen Stadtbefestigung errichtet²⁹ und gehörte dem damals neu eingeführten Kammertortypus an. Dieser Stadttortypus war wegen der Überdeckung des Hofes für Verteidigungszwecke eher ungeeignet.³⁰ Allein konstruktive Gründe für die Verdoppelung des Bogenlaufes scheinen dabei nicht vorrangig gewesen zu sein: Die Breiten der Bogenöffnungen sind im Vergleich zu anderen Bogentoren, wie beim Beispiel der Porta S. Maria, mit einer Spannweite von 4,20 m eher durchschnittlich. Und auch die Ausflussöffnung der Cloaca Maxima in Rom unterhalb des Forum Boarium mit einem dreifachen Bogenlauf misst im unteren Bogen nur eine Spannweite von 3,00 m.³¹

Bei der zweiten, späteren Form handelte es sich um die Angabe mehrerer Faszien im Bogenlauf. Diese verbanden die einzelnen Wölber formal miteinander und bildeten auf diese Weise formal die Vereinheitlichung des Bogenlaufes zu einer Archivolte aus. Besonders frühe Vertreter sind

die beiden um die Mitte des 1. Jh. v. Chr. errichteten Stadttore: die Porta Gemina in Asculum³² und die Porta dei Leoni in Verona.³³ Beide Gestaltungsformen fassen dadurch, dass sie sich über den gesamten Bogenlauf hin fortsetzen, die Wölber formal zu einer Einheit zusammen.

Ein Beispiel für den Einsatz eines Gurtbogens in der griechisch-hellenistischen Architektur fehlt im Stadttorbau gänzlich. Der früheste Vertreter für den Einsatz von Faszien innerhalb der griechischen Welt ist das Osttor von Side. Hier sind mehrere Bauphasen nachweisbar, mindestens eine von ihnen ist römisch.³⁴

DIE GESTALTUNG DES ÜBERGANGS ZWISCHEN BOGENLAUF UND BOGENABLAUF

Die einfachste Form der visuellen Akzentuierung des Übergangs zwischen dem Bogenlauf und dem Bogenablauf bestand darin, die Kämpfer mit einem Profil zu versehen. Profilierte Kämpfer haben sich beispielsweise bei der Porta Maggiore in Tibur (Abb. 5) in situ erhalten.³⁵ Das

²⁸ Brands 1988, Kat. 20.2.3, 123; Dornisch 1992, Kat. 153, 199; Böttcher-Ebers 2012, Kat. 15, 112–3.

²⁹ Brands 1988, 123.

³⁰ Zum Kammertortypus: Brands 1988, 29–33. Eine vorzügliche Rezension mit dem Verweis auf die Bedeutung der Kammertore in Hinsicht auf den „Anfang des Repräsentationsbaus“: Kader 1994, 331, 337–8.

³¹ Böttcher-Ebers 2012, Kat. 44, 183–5.

³² Brands 1988, Kat. 12.2.1, 104–6.

³³ Brands 1988, Kat. 44.2.1, 215–7. Mit der Angabe von Faszien im Bogenlauf wurde ein Gestaltungselement aus den griechischen Säulenordnungen, der Architrav, auf das gewölbte Architekturelement übertragen.

³⁴ Rumscheid 1994, 91 Anm. 128 datiert die Waffenreliefs, welche der Bauphase mit der Angabe von Faszien im Bogenlauf angehören, zuletzt in das 1. Jh. v. Chr.

³⁵ Böttcher-Ebers 2012, Kat. 76, 253–4.



Abb. 5 Tibur. Porta Maggiore, Feldseite, Bogendurchgang, profilierte Kämpfer (J. Böttcher-Ebers).

Stadttor gehörte, wie auch die oben erwähnte Porta S. Maria in Ferentinum, dem Kammertortypus an, der ab dem beginnenden 1. Jh. v. Chr. vor allem in Hanglage zum Einsatz kam.³⁶ Das Osttor von Side wäre auch hierfür ein früher Vertreter im Osten, der allerdings erst in seiner römischen Bauphase eine solche Ausstattung erhielt.³⁷

DIE GESTALTUNG DER SCHLUSSTEINE UND ANWÖLBER

Der Schlussstein war der wichtigste Bestandteil einer Bogenkonstruktion. Der Bogen trug sich erst allein mit dem Einsatz des Schlusssteines. Und auch dieser konstruktive Bestandteil erfuhr eine Hervorhebung im

Bogenlauf. An der Porta di Giove in Falerii Novi war über dem Schlussstein eine Kopfprotome (wahrscheinlich der Kopf einer Medusa) angebracht (Abb. 3). Bei den meisten Vertretern dieser Gestaltungsform wurden jedoch die Schlusssteine selbst plastisch gestaltet, so bei der Porta all'Arco in Volaterrae.³⁸ In Verbindung mit den Schlusssteinen konnten auch die Anwölber mit Protomen versehen werden. Somit kam es zu einer gleichzeitigen Betonung von Bogenansatz und Bogenscheitel. Für eine Markierung der Schlusssteine und/oder der Anwölber durch die Verwendung eines anderen Materials, das plastische Hervorheben bzw. die figürliche Ausgestaltung gibt es im griechisch-hellenistischen Stadttorbau keinen Nachweis.³⁹

Die Beordnung von Halbsäulen

Nach der vollständigen Entwicklung des Halbsäulen-Arkadenmotivs am Tabularium in Rom fand die Kombination der beiden Fassadenelemente im 1. Jh. v. Chr. auch im Stadttorbau Einzug.⁴⁰ Dabei waren dem Bogen bei den Stadttoren häufiger Wandpilaster als Halbsäulen beigeordnet. Die Porta Venere und die Porta Urbica in Hispellum (Abb. 6) sind hierfür besonders frühe Vertreter, welche beide aus der zweiten Hälfte des 1. Jh. v. Chr. stammen.⁴¹ Dagegen lässt sich auch eine Beordnung von Säulen oder Halbpilastern im griechisch-hellenistischen Stadttorbau nicht feststellen. Das jüngere Heilige Tor in Milet weist zwar in der stets erneut zitierten Rekonstruktionszeichnung aus den 30er-Jahren des 20. Jh. eine solche Beordnung auf, doch gab es dem Grabungsbefund nach keinerlei Hinweise dafür.⁴²

Durch die Übernahme des Halbsäulen-Arkadenmotivs in die Stadttorarchitektur der römischen Welt wurde der Bautypus mit den gleichen Fassadenelementen ausgestattet, die beispielsweise auch solche repräsentativen Großbauten wie die mittelitalischen Terrassenheiligtümer aufwiesen.⁴³ Spätestens mit dem Einzug dieses architektonischen Motivs hatte sich die Wandlung des Stadttors von einem Bauwerk

³⁶ Vgl. Anm. 30.

³⁷ Dazu ausführlich: Böttcher-Ebers 2012, 25–6.

³⁸ Brands 1988, Kat. 45.2.1, 219–22; Dornisch 1992, Kat. 136, 189–90.

³⁹ Das einzige Beispiel ist durch einen Brückenbau in Rhodos überliefert, der jedoch seiner Ausführung nach bereits ein römisches Bauwerk war: Böttcher-Ebers 2012, 19.

⁴⁰ Böttcher-Ebers 2012, Kat. 51, 195–200.

⁴¹ Porta Venere: Brands 1988, Kat. 23.2.5, 132–3; Porta Urbica: Brands 1988, Kat. 23.2.2, 131.

⁴² Vgl. von Gerkan 1935, 19 Abb. 11; Dornisch 1992, Abb. 20. Dagegen: Böttcher-Ebers 2012, 24.

⁴³ So z. B. am Tabularium in Rom: Böttcher-Ebers 2012, Kat. 51, 195–200, beim Heiligtum des Hercules Victor in Tibur: Böttcher-Ebers 2012, Kat. 71, 244–51.



Abb. 6 Hisspellum. Porta Urbica, Feldseite, Kombination von Bogen und Wandpilaster (J. Böttcher-Ebers).

der Militärarchitektur hin zu einem Monument der Stadtarchitektur vollzogen. Der Torbau, welcher sich bei den frühen Befestigungsanlagen noch formal der Stadtmauer unterordnete und nicht als Einzelmonument betont wurde, war nunmehr zu einem eigenständigen Bauwerk mit einer dem Zeitgeschmack entsprechenden Erscheinungsform transformiert worden. Die verschiedenen visuellen Akzentuierungen am Bogen waren dabei von Bau zu Bau unterschiedlich in ihrer Ausführung bzw. in der Kombination der gestaltenden Elemente. Folglich glich kein Stadttor dem anderen.

Der Bogen innerhalb der römischen Architektur

Die Entwicklung des Bogens vom Architekturelement zu einem Mittel der Fassadengestaltung war innerhalb

der römischen Architektur der späten Republik keine singuläre Erscheinung, die sich allein auf den Bautypus Stadttor beschränkte. Bei der visuellen Akzentuierung des Bogens handelte es sich vielmehr um eine übergreifende Entwicklung, welche sich an vielen Bautypen, u. a. an Brücken, Aquädukten, Heiligtümern und Villenanlagen seit dem beginnenden 2. Jh. v. Chr. nachweisen lässt.⁴⁴ Der Bogen wurde auch dort zur Schau gestellt, bewusst vorgeblendet und erfuhr in seiner Außenansicht eine dekorative Ausgestaltung.

Die Experimentierfreudigkeit und die intensive Auseinandersetzung mit dem Bogen als Architektur- und Fassadenelement führten innerhalb der römischen Architektur schlussendlich zu einer Monumentalisierung des Architekturelements in Form der Bogenmonumente.⁴⁵

Der Bogen entwickelte sich durch sein vielfaches Auftreten und seine konsequente Akzentuierung innerhalb der verschiedensten Bautypen zu einem Leitmotiv der römischen Architektur, so auch innerhalb des Stadttorbaus.

Der Bogen innerhalb der griechisch-hellenistischen Architektur

Ganz im Gegensatz zur republikanischen Architektur war der Umgang mit dem Bogen bei den griechisch-hellenistischen Bauten zurückhaltend. Auch hier wurde er zunehmend innerhalb verschiedenster Bautypen eingesetzt. Jedoch ging seine Verwendung wie bei den Stadttoren nicht über eine konstruktive Funktion hinaus. Durch die Dominanz der Säulenarchitektur konnte sich der Bogen nicht als Fassadenelement durchsetzen. Es lässt sich für die gesamte griechisch-hellenistische Architektur eine generelle Tendenz feststellen, die Bogenkonstruktion nach Möglichkeit der Sichtbarkeit in der Außenansicht zu entziehen und sie zugleich mit gängigen Fassadenelementen zu verblenden. Dies traf beispielsweise für die makedonischen Kammergräber oder auch die Stoa des Eumenes II. in Athen zu.⁴⁶ So war der Stirnbogen der Tonnengewölbe der Kammergräber stets verblendet.⁴⁷ Und der stützenden Bogenreihe hinter

⁴⁴ Zu den einzelnen Bautypen und deren Veränderungen durch den Einsatz des Bogens: Böttcher-Ebers 2012, 32–42.

⁴⁵ Böttcher-Ebers 2012, 50–9.

⁴⁶ Böttcher-Ebers 2012, 10–1.

⁴⁷ Gossel 1980, 23 formuliert die Beziehung zwischen der Fassadengestaltung und dem innenliegenden Gewölbe der Grabkammer folgendermaßen: „Die einzige konstante Gemeinsamkeit aller Fassadengräber besteht darin, dass die Frontmauer völlig verdeckt wird, sich also von außen nicht als Wölbungsbau zu erkennen gibt.“ Dies lässt sich sowohl für die frühen Kammergräber wie dem sog. Philippsgrab in Vergina als auch für die späten Vertreter im 2. Jh. v. Chr. wie beispielsweise in Angista: Gossel 1980, Kat. 7, 104–11 feststellen. Zum Entzug der Sichtbarkeit des Bogens und dem damit verbundenen Mehraufwand am Beispiel des sog. Philippsgrabes in Vergina: Böttcher-Ebers 2012, 18.

der Stoa des Eumenes II. an der Athener Akropolis lagerte eine Quadermauer vor.

Vergleichbare zeitgenössische Bauten wiesen in der spätrepublikanischen Architektur, bezogen auf die Sichtbarkeit des Bogens, ein ganz anderes Erscheinungsbild auf. So waren die Bogenzugänge am Scipionengrab in Rom⁴⁸ weithin sichtbar und die mächtigen Bogensubstruktionen der Terrassen am Heiligtum des Hercules Victor in Tivoli⁴⁹ und am Heiligtum auf dem Monte S. Angelo in Terracina können sogar als landschaftsprägend bezeichnet werden.⁵⁰

Die Semantik des Bogens und seine Übertragung auf die urbanistische Funktion der republikanischen Stadttore

Untersucht man die Standorte von Bogenarchitekturen – also aller Architekturen, die in ihrer Außenansicht Bögen aufweisen – näher, so wird deutlich, dass die konstruktive Funktion des Bogens und seine visuelle Zeichenhaftigkeit für die Entwicklung der urbanistischen Funktion der Stadttore wesentliche Auswirkungen besaßen.⁵¹ Der Bogen diente in den verschiedenen Bautypen dazu etwas zu erhöhen, zu stützen und dabei zugleich passierbar zu machen. Diese konstruktiven Funktionen wurden bewusst für die visuelle Inszenierung der jeweiligen

Architekturen im Stadtbild genutzt. Dabei wurden Sichtbezüge und Sichtachsen hergestellt, so dass die Architekturprospekte weithin sichtbar wurden.⁵²

Die Nutzbarmachung der visuellen Zeichenhaftigkeit, welche der Bogenkonstruktion innewohnte, lässt sich nicht nur bei den Bogenreihen der Substruktionsanlagen feststellen, sondern ist auch bei einzelnen Bögen nachweisbar, bei denen grundsätzlich die Funktion des Bogens als Passage hervorgehoben wurde und die auf diese Weise Zonen des Übergangs markierten. Der Bogen diente demnach innerhalb der Urbanistik einer römischen Stadt als Zeichen einer räumlichen Zäsur. In diesem Zusammenhang sind auch die römischen Bogenmonumente zu sehen, welche sich stets am Rande von Platzanlagen erhoben und damit den Übergang zwischen funktional verschiedenen städtischen Bereichen anzeigten.

So findet man den Bogen in seiner Einzelform häufig in Zugangssituationen wieder, beispielsweise am Rand des Forums oder eben an der Grenze zur Stadt.⁵³

Für den zeichenhaften Einsatz des Bogens innerhalb des Stadttorbaus bedeutete dies, dass er den Übergang zwischen Stadt und Umland markierte. Durch die geradlinige Straßenführung der Fernverkehrsstraßen zu den Stadttoren und Bogendurchgängen wurden Sichtachsen hergestellt, welche die räumliche



Abb. 7 Aquinum. Porta San Lorenzo, Feldseite, Verlauf der Via Latina (J. Böttcher-Ebers).

⁴⁸ Böttcher-Ebers 2012, Kat. 35, 161–3.

⁴⁹ Böttcher-Ebers 2012, Kat. 71, 244–9.

⁵⁰ Böttcher-Ebers 2012, Kat. 66, 231–5.

⁵¹ Zum urbanistischen Kontext spätrepublikanischer Bogenarchitekturen: Böttcher-Ebers 2012, 60–4.

⁵² Vgl. das Heiligtum auf dem Monte S. Angelo, dessen Bogenfassaden auf die Via Appia und den Hafen der Stadt hin ausgerichtet waren, wodurch eine unterschiedliche Ausrichtung von Tempel und Substruktion zustande kam: s. Anm. 38.

⁵³ Ein frühes Beispiel ist der Fornix auf dem Forum von Cosa: Böttcher-Ebers 2012, Kat. 7, 97–9. Dies trifft nachweislich schon für das erste überlieferte stadtrömische Bogenmonument, den Fornix Fabianus in Rom, zu: Böttcher-Ebers 2012, Kat. 53, 201–4.

Wirkung der durch das Gewölbe dunkel verschatteten Bogendurchgänge zusätzlich betonten und auf diese Weise die Zäsur aus der Ferne sichtbar machten. So lief die Via Latina in Aquinum schnurgerade auf die Porta San Lorenzo zu und wurde von da aus als *decumanus maximus* weiter durch die Stadt geführt. Der Stadtzugang war dadurch schon von Weitem sichtbar (Abb. 7).

Die unterschiedliche Rolle des Bogens für die Entwicklung der Stadttore als repräsentative Stadtzugänge innerhalb des republikanischen und griechisch-hellenistischen Befestigungsbaus

In der Entwicklung des Bogens im spätrepublikanischen Stadttorbau spiegelt sich der Wandel des Bautypus von einer nach wehrtechnischen Prämissen konzipierten und formal der Befestigungsanlage untergeordneten Architektur zu einem repräsentativen Einzelmonument wider. Durch die Verwendung des Bogens, seine Akzentuierung innerhalb der Mauerfläche und die bewusste Inszenierung seiner visuellen Zeichenhaftigkeit wurden die Stadttore für den antiken Betrachter weniger als wehrhafte Militärbauten erfahrbar, vielmehr gaben sie sich als durch den Zeitgeschmack der städtischen zivilen Architektur gekennzeichnete repräsentative Bauwerke zu erkennen. Die neue Repräsentativität der Stadttore lässt sich außer durch die erhaltenen Denkmäler auch durch ihre Rezeption in der römischen Münz- und Reliefkunst des 1. Jh. v. Chr. nachweisen.⁵⁴

Auch die griechisch-hellenistischen Stadttore erfuhren eine repräsentative Ausgestaltung. Bereits Aristoteles verwies bei der Beschreibung des idealen Staates darauf, dass die Mauern (und mit ihr das Stadttor) auch dem Zweck diene, „Zierde einer Stadt“ zu sein.⁵⁵ Jedoch gehörte die Ausgestaltung des Bogens gewiss nicht zur Zierde eines griechisch-hellenistischen Stadttores.

Die visuelle Zeichenhaftigkeit, welche dem Bogen per se auch bei den Stadttoren der griechischen Welt grundsätzlich innewohnte, wurde nicht genutzt und weiterentwickelt. Der Bogen wurde im Stadttorbau,

wie auch bei allen anderen Bautypen dieser Region, nur als ein der Säulenarchitektur untergeordnetes Konstruktionselement wahrgenommen und blieb daher auch eng mit der Innenarchitektur, also dem Stirnbogen eines dahinterliegenden Tonnengewölbes, verbunden. So kam er bis zu den ersten Bauten der römischen Usurpatoren auf dem Gebiet auch weder als reines Fassadenelement zum Einsatz noch erfuhr er eine bewusst vorgenommene visuelle Akzentuierung gegenüber der Mauerfläche.

Dennoch spiegelt sich gerade in der Verschiedenheit der gewählten Gestaltungsmittel die Repräsentativität gleichermaßen der griechisch-hellenistischen wie der republikanischen Stadttore wider, indem sie eben die jeweiligen, voneinander differenzierten architektonischen Leitformen vortragen.⁵⁶ Der Bogen war seit der späten Republik eine der vorherrschenden architektonischen Leitformen einer römischen Stadt. Und so fand er auch nur Aufnahme in die Fassadengestaltung der republikanischen Stadttore. Seine Ausgestaltung war im 2. und 1. Jh. v. Chr. sehr individuell und unterlag noch keinem architektonischen Kanon, wie er in augusteischer Zeit verbindlich wurde. In diesem Zusammenhang sind die Gestaltung und der zeichenhafte Einsatz des Bogens im republikanischen Stadttorbau auch als ein Mittel der Baukonkurrenz zwischen den römischen Städten zu interpretieren.⁵⁷

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⁵⁴ Böttcher-Ebers 2012, 74. So beispielsweise die Darstellung des Stadttors von Tusculum: Fuchs 1969, 29, 59–61; Crawford 1974, 523 Nr. 515, 1. Zur Rezeption von Stadttoren auf Münzen und Reliefs der späten Republik: Böttcher-Ebers 2012, 73–6.

⁵⁵ Arist. *pol.* 7.1331a.11.

⁵⁶ Es wäre eine eigene Studie wert zu untersuchen, ob sich die griechisch-hellenistischen Stadttore in ihrer Fassadengestaltung an den innerstädtischen Propylonbauten orientierten, so wie sich die republikanischen Stadttore an den Bogenmonumenten orientierten.

⁵⁷ Dies wird auch dadurch unterstützt, dass die visuellen Akzentuierungen vorrangig auf der Feldseite der Stadttore vorgenommen wurden.

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CANDENTIA MOENIA. THE SYMBOLISM OF ROMAN CITY WALLS*

Saskia Stevens

Abstract

Fortifications were often the first feature a visitor would notice approaching a Roman city. While their most obvious function was defence and deterrence, city walls also served other purposes within the urban landscape. In the relatively peaceful Augustan period, for example, city walls were donated by the emperor or a member of the imperial family, adding status to an existing city and stressing its connection with Rome. In the same period, new colonies were founded, enclosed by – at times – highly ornate city walls monumentalising the urban appearance. An exploration of the legal sources reveals, furthermore, that the city wall was also used as a reference point for various regulations. They marked the limit inside which certain aspects were prohibited, for example, the burial of the dead. By examining ancient literary sources, inscriptions and archaeological evidence, this paper focuses on the symbolic functions of fortifications and on how they organised the social, legal and religious space within a Roman city.

On swiftly gliding course we bear towards glittering city walls. [...] In the colour of its native rocks it surpasses smiling lilies, and the stone flashes bedecked in polished radiance.¹

When one thinks of city walls, their defensive function usually comes to mind first. In the Roman world there was, however, more to a city wall than just its defensive aspect. Rutilius Namatianus' description from the late 4th or early 5th century AD of Luni's walls, as cited above, reveals, for example, that city walls could also have a

decorative touch to them: Luni's walls seemed to have been made of shiny white marble.² In addition to an aesthetic aspect, the unprecedented activity in city wall building during the Augustan age – a relatively peaceful period – also seems to suggest a symbolic value of city walls. Furthermore, city walls were used as an important reference point in legal matters. By exploring ancient literary sources, epigraphic and archaeological evidence, this paper examines the symbolic function of city walls and their role in the organization of the social, legal and religious landscape of a Roman city.

* Translations are based on the Loeb Classical Library editions (Harvard). I thank the anonymous reviewer and the editors for their feedback and useful comments.

¹ Rutilius Namatianus 2.63: '*advehimur celeri candentia moenia lapsu. [...] indigenis superat ridentia lilia saxis, et levi radiat picta nitore silex.*'

² Frova & Rossignani 1985, 43. Luni was originally founded around 177 BC with walls made of rock, schist and limestone. In the late 4th century AD the town was destroyed by an earthquake. During the rebuilding of Luni a lot of marble from the town was re-used as spolia. As the exact year of the earthquake is not known, it is unclear what *moenia* Namatianus was admiring: was he referring to the marble spolia in the reconstructed city wall or to an earlier imperial refurbishment of the town's fortifications, which also included marble? Durante 2001, 8–9, 23, 52.

The *sulcus primigenius*, the *pomerium* and the city wall

An exploration of the symbolic function of the city wall should start with the Roman urban foundation ritual, the *sulcus primigenius*, during which the course of the city wall was established. Closely related to the city wall was the *pomerium*, a city's ritual boundary.³ According to the ancient sources, the foundation ritual happened along these lines: on a day approved by the auspices the city founder breached virgin soil with a plough pulled by a team of cattle. The furrow resulting from this action represented the city's defensive ditch, and the ploughed up soil indicated the location of the future city wall.⁴ The *pomerium* and its relation to the city wall are described by the Roman antiquarian Varro as follows:

the circle (*orbis*) which was made back of this was the beginning of the city (*urbs*); because the circle was back of the wall (*post murum*), it was called *postmoerium*. It set the limits for taking the urban auspices.⁵

The term *pomerium* subsequently resulted from the assimilation between *post* and *murum*. The exact position of the *pomerium* in respect to the city wall, however, remains rather vague, as the etymology of *pro* and *murum* would also be linguistically valid.⁶ To complicate matters further, the *pomerium* could be enlarged if the limits of Rome's sphere of influence had been extended.⁷ This meant that its course could in time become considerably removed from the wall's circuit. Besides demarcating the limit of the urban auspices, the *pomerium* also marked the boundary of the civic city, including the power of the *tribunicia potestas* but excluding military authority, such as the *comitia centuriata* and the *imperium proconsulare*.⁸ It is generally accepted that cremations and burials were also excluded from the *pomerium*, even though none of the primary sources mention this restriction explicitly.⁹



Fig. 1 Denarius of Octavian depicting the *sulcus primigenius* (RIC 1².272). (By courtesy of De Nederlandsche Bank, Amsterdam).

Not only the wall was marked out during the ceremony, the location of the city gates was also determined as the plough was lifted where gates were planned. The latter was done to enable impure entities to cross the inaugurated urban limit.¹⁰ Starting from the ritual, the city wall was one of the first features present in a new town, giving it an urban appearance and defining it as a city, *urbs*, or as Varro put it:

Therefore also towns which earlier had the plough drawn around them were termed *urbes* 'cities' from *orbis* 'circle' and *urvum* 'curved'.¹¹

Varro then continues that all cities that have been founded in the same way as Rome are called *urbes*, but could he also have been alluding to some sort of Roman urban 'quality label' with Rome as the standard? The frequent reference to the foundation ritual in Roman coinage (Fig. 1), inscriptions and reliefs could imply this aspect. A famous example is the early imperial relief from Aquileia showing a ceremonial team of cattle with garlands between their horns, drawing a plough followed by a crowd of men in togas (Fig. 2).¹² This scene, depicting the *sulcus primigenius*, probably once adorned a

³ For comprehensive discussions of the *sulcus primigenius*, the city wall and the *pomerium* see, for example, Andreussi 1999; Panciera 1999; Simonelli 2001; De Sanctis 2007.

⁴ Varro LL 5.143.

⁵ Varro LL 5.143: 'Post ea qui fiebat orbis, urbis principium, qui quod erat post murum, postmoerium dictum, eoque auspicia urbana finiuntur.'

⁶ Antaya 1980, 187; Milani 1987, 7–8; Simonelli 2001, 119–28; Cibotto 2006, 29. For a close reading of the primary sources see Andreussi 1999, 96–7.

⁷ There is only evidence for pomerial extensions in Rome. For *pomerium* stones indicating the extended pomerial line in Rome: CIL VI.31537a–d (Claudius) and CIL VI.31538a–c (Vespasian and Titus). For the pomerial extensions, see for example Simonelli 2001, 151–60; Coarelli 2009.

⁸ Frézouls 1987, 377–8; Andreussi 1999, 99–100. This changed when the senate first granted Octavian the right in 30 BC to hold the *tribunicia potestas* also outside the *pomerium* until the first mile stone (D.C. 51.19.6). In 23 BC, the senate also gave Augustus permission to hold the *imperium proconsulare maius et infinitum*, which meant he no longer had to lay down the proconsular authority when crossing the *pomerium* (D.C. 53.32.5). See also Patterson 2000, 90–1.

⁹ For a more extensive discussion of the relation between the *pomerium* and the location of burials see Stevens 2015, chapter 4.

¹⁰ Plut. Rom. 11.3.

¹¹ Varro LL 5.143: 'Quare et oppida quae prius erant circumducta aratro ab orbe et urvo urbes.'

¹² Di Filippo Balestrazzi 2005, 93–123, at 94–106.



Fig. 2 Relief from Aquileia depicting the *sulcus primigenius*. (By courtesy of the Museo Archeologico Nazionale di Aquileia).

public building, where the image referring to the town's foundation according to Rome's standards would have been most visible.¹³

Besides originating from the urban foundation ritual, city walls and gates also had a special legal status: they were considered *res sanctae*.¹⁴ This literally meant that they were structures that were rendered 'sacred' by a religious act and were therefore regarded as inviolable. Ancient lawyers explained the *sanctitas* of the walls and gates by the nature of the *sanctio* that fell to its violators:¹⁵ because a violator of walls received the death penalty, the walls were considered *res sanctae*.¹⁶ This regulation referred back to the 'first' violator of the walls of Rome, Remus, who was killed for jumping across his brother Romulus' wall, as described by Livy and Plutarch.¹⁷ Nowadays, the *communis opinio* is that it was the *sulcus primigenius* that gave city walls and gates this special status.¹⁸ This meant that it was forbidden to build over or against walls and gates and that the only proper way to leave a city was through the city gate, and certainly not by climbing over or jumping across the city wall.¹⁹

The city wall as a point of reference

Thanks to its special legal status the city wall was, from a legal point of view, a well-protected structure. Considering, in addition, its vastness and prominence in the city landscape, the city wall was the structure *par excellence* to function as an urban point of reference. In fact, the Latin adjectives *intramuranus* and *extramuranus*,²⁰ referring to buildings or situations located inside or outside the city wall respectively, and descriptions of people, such as '*incolis viris et mulieribus intra muros habitantibus*',²¹ tell us that the Romans also clearly ascribed this role to city walls. Even though city walls feature as a reference point in inscriptions and entries in legal codes such as the Digest, the walls are not always mentioned explicitly. Similar to Varro's description, in which he basically stated that all *urbes* have city walls, legal sources tell us that the area enclosed by a city wall was considered *urbs* proper. Alfenus, a lawyer of the 1st century BC, wrote that *urbs Roma* is the area enclosed by the city wall, but added, moreover, that Rome extended as far as where there were *continentia aedificia*, contiguous buildings.²² Also the Severan jurist Paulus wrote:

And indeed pretty well all cities (*urbes*) are held to finish with the wall, [but] Rome reaches as far as the built-up area.²³

Rome's urban limit, as Alfenus and Paulus wrote, was not simply defined by the city wall: Rome's boundary was flexible and as such defined as *continentia aedificia* or *continentia*, contiguous buildings.²⁴ From these legal texts we can deduce that from at least the 1st century BC Rome had sprawled beyond its 4th-century BC wall, something that has also been attested in the archaeological record.²⁵ The definition for the legal city limit as 'as far as the

¹³ Beard *et al.* 1998, vol. 2, 24.

¹⁴ Gai. *Dig.* 1.8.1pr. '*sanctae quoque res, veluti muri et portae, quodammodo divini iuris sunt.*' ('Also things under divine protection, such as city walls and gates, are to some extent subject to divine law.') Bloch 2006, 49; Carandini 2006, 181; Cibotto 2006, 33.

¹⁵ Ulp. *Dig.* 1.8.9.3: '*Proprie dicimus sancta, quae neque sacra neque profana sunt, sed sanctione quadam confirmata: ut leges sanctae sunt, sanctione enim quadam sunt subnixae. quod enim sanctione quadam subnixum est, id sanctum est, etsi deo non sit consecratum: et interdum in sanctionibus adicitur, ut qui ibi aliquid commisit, capite puniatur.*' ('In particular we say that those things are *sanctus* that are neither sacred nor profane, but that are protected by a certain sanction: like laws are *sanctus* because they are supported by a certain sanction. In fact, that which is supported by a certain sanction, is *sanctus*, even if it is not consecrated to a god: and sometimes it is added to the sanctions that he who commits a crime there, is punished by death.') Bloch 2006, 49; Carandini 2006, 181; Cibotto 2006, 27.

¹⁶ Ulp. *Dig.* 1.8.9.3; *Inst.* 2.1.11.

¹⁷ Liv. 1.7; Plut. *Rom.* 10.1.

¹⁸ Carandini 2006, 181; Cibotto 2006, 27–31.

¹⁹ Pomp. *Dig.* 1.8.11; Marcian. *Dig.* 1.8.8.2; Hermogen. *Dig.* 43.6.2.

²⁰ *TLL* v. *extramuranus* and *intramuranus*; cf. *CIL* XI, 3798 on *extramurani* and *CIL* XI, 3797 and XI 3808 on *intramurani*.

²¹ *CIL* II.1282c. Cf. Panciera 1999, 9.

²² Marcel. *Dig.* 50.16.87.

²³ Paul. *Dig.* 33.9.4.4: '*et quidem urbes fere omnes muro tenus finiri, romam continentibus ...*'.

²⁴ Paul. *Dig.* 33.9.4.4; Marcel. *Dig.* 50.16.87. See also Frézouls 1987, 382–3.

²⁵ Cf. Le Gall 1991, 55–9.

contiguous buildings' is rather vague but at the same time flexible, and could have been chosen on purpose as a response to the constantly growing city with its ever advancing city limit. Frézouls convincingly argued that Augustus had already anticipated the urban advancement of Rome by stretching the limits of the XIV administrative regions he created in 7 BC well beyond the so-called Servian wall, which by then no longer was a continuous circuit.²⁶

Even though most Roman cities did not outgrow their city walls, Rome was by no means unique. Other cities that sprawled beyond the original limits on a grand scale and in a planned manner are, for example, Ostia, Pompeii, Aquileia, Verona, Alba Fucens, Augusta Bagiennorum and Minturnae.²⁷ Although there is no direct evidence, it is very well possible that the legal limit of these towns was also redefined with a flexible term such as *continentia aedificia*.

As a limit, the city wall divided the landscape, and simultaneously functioned as an agent of exclusion and inclusion.²⁸ The city wall included people who shared the same urban identity, citizens of a particular town, and excluded the others, that is, those who did not wear that same citizen label.²⁹ A city wall embraced its inhabitants and created a collective identity for all those living inside the walls. Simultaneously, those who were living inside labelled those who were not, as 'other'. Legal sources tell us, for example, that the walls kept unwanted entities outside, such as enemies, the dead and other 'unclean' people such as funerary workers.³⁰

From late 4th or early 5th century AD there is more evidence for the excluding role of the city wall, in this case, Rome's Aurelian wall. A collar belonging to the slave Asellus illustrates a rather unpleasant example of

the city wall's limiting role, as it restrained the slave's movement. The inscription on his slave collar reads:³¹

I am Asellus, slave of Praiectus, Praefect of Provisions. I have gone outside the city wall, capture me because I am a fugitive and return me to Barber's street near the temple of Flora.³²

It has been suggested that slave collars such as Asellus' one resulted from Constantine's ban on the branding of slaves.³³ It underlines the role of the city wall as a reference point, also in regard to the Aurelian wall. Other examples from the late 4th and early 5th century AD illustrate a similar use of the city wall. A number of laws suggest that outward appearances could keep people outside a city: those wearing barbarian dress and sporting long hair were prevented from entering Rome.³⁴ Even though these restrictions reflect the situation in Rome in the late 4th and early 5th century AD, they do illustrate that a border in the urban landscape not only physically separated the land, but also conditioned human behaviour on either side of that boundary. What that behaviour was depended on the legal framework within which the city wall functioned as a boundary.

The urban borderland

Inherent to the creation of an artificial border in the landscape was the emergence of the borderland. Borderlands are regions that are created and influenced by the presence of a separating border. An essential characteristic of the borderland is, moreover, the existence of some kind of interaction between the zones on both sides.³⁵ The border, which separates the regions, simultaneously acts as a connecting factor. In a Roman

²⁶ Frézouls 1987, 374–5.

²⁷ See Stevens 2015, chapter 3 on the transformation, incorporation and dismantling of city walls in Roman Italy. Even though Augusta Bagiennorum did not have city walls, its limit was indicated by gates and towers.

²⁸ On the city wall as includer and excluder cf. Rosada 1990, 365.

²⁹ Lightfoot & Martinez 1995, 473; Baud & Van Schendel 1997, 213; Newman 2006, 173, 176.

³⁰ Bodel 1994, 72–6 on the late Republican or early Imperial *Lex Libitinaria* from Puteoli. Also, Bodel 2000, 143–4.

³¹ Hülsen 1891, 341–3; Dey 2011, 213–14.

³² CIL XV 7172: 'Asellus se/rvus Praeiectionis / officialis praefec/ti annon<ae>IS> foras mu/ru(m) exivi tene me / quia fugi reduc me ad Flora(e) / ad to(n)sor/es.' The temple of Flora is probably located on the Aventine, close to the Aurelian wall. See Dey 2011, 214 n. 17.

³³ De Rossi 1874; Hülsen 1891, 341–3; Dey 2011, 213.

³⁴ CTh. 14.10.2 (AD 397): 'usum tzangarum adque bracarum intra urbem venerabilem nemini liceat usurpare' ('No person should be allowed the use of Parthian boots and trousers within the venerable city.') CTh. 14.10.3 (AD 399): 'intra urbem Romam nemo vel braxis vel tzangis utatur' ('Within the city of Rome no person shall wear either trousers or Parthian boots.') CTh. 14.10.4 (AD 416) 'maiores crines, indumenta pellium etiam in servis intra urbem sacratissimam praecipimus inhiberi' ('Within the most sacred city, we order that long hair and fur garments are to be prohibited, even among slaves.') These dress codes are probably referring to people wearing barbaric or gothic clothes rather than to 'barbaric' people. See Dey 2011, 214–15.

³⁵ Baud & Van Schendel 1997, 216; Newman 2006, 179.

urban context the land on either side of the city wall can be identified as borderland.

The urban borderland was not only literally land on the edge of a city, but was also metaphorically considered a marginalized zone, an area where liminal activities took place. Graffiti from the final decades of Pompeii refer to the area near the city wall as a place for obscure and polluting activities, such as prostitution and the dumping of excrement.³⁶ Also more official inscriptions, such as the ones erected by the urban praetor Lucius Sentius outside the Esquiline Gate in Rome at the beginning of the 1st century BC, tell us that these activities were not uncommon to the borderland. The inscription reads:

Lucius Sentius, son of Gaius, praetor, has made regulation, by decree of the Senate, about the siting of graves. For the public good. No burning of corpses beyond this marker in the direction of the city. No dumping of manure or unwanted corpses.³⁷

Three of these inscriptions were found *in situ* facing the city, which could indicate that the edict was to be read primarily by people *leaving* the city, therefore by people living inside the city wall. Sentius stated in the text, that it was the area “closer to the city”,³⁸ that is, between his stones and the *urbs* defined by the city wall, that

was subject to the prohibition.³⁹ Sentius’ edict would therefore seem to have been a local response to illegal burials and general waste dumping, including unwanted corpses (*cadavera*), in the area immediately outside the Esquiline Gate.⁴⁰ ‘Proper’ burials, on the other hand, seem to have been allowed in the area, but only in the places set aside for that particular purpose (*loca*).⁴¹

Another inscription dealing with pollution of the Esquiline area was found closer to the city gate: the *Senatus Consultum de Pago Montano*.⁴² This senatorial decree forbade the construction of both permanent (*ustrinae*) and temporary pyres (*foci ustrinae causa*), as well as the dumping of manure and earth. The date of the inscription is not certain, but it is generally attributed to the 2nd or 1st century BC.⁴³ The *Senatus Consultum* has been linked with the Sentius inscription because they roughly deal with the same concerns, but thus far there is no consensus about which decree was issued first.⁴⁴

Also from Verona we have an inscription banning the dumping of manure in the area demarcated by *cippi* and, moreover, threatening the violator who ignored the prohibition.⁴⁵ The formal nature of the measure against waste dumping from Rome and Verona, together with the informal graffiti on the matter from Pompeii, would suggest that illegal waste dumping was a long-

³⁶ For example, a graffito found in a lararium on the outside of the city wall near the Vesuvian Gate: CIL IV.6641: ‘Cacator si<c>G> valeas / ut tu hoc locum tra(n)sea(s).’ (‘Shitter, may you be well, if only you pass by this spot.’) See also: CIL IV.7038: ‘stercorari / ad murum / progredere si / pre(n)sus fueris poena(m) / patiari necesse / est cave’ (‘Dung carriers, continue to the wall; if you are caught you will be punished, be careful!’).

³⁷ CIL VI.31614: ‘L(ucius) Sentius C(ai) f(ilius) pr(aetor?) de sen(atus) sent(entia) loca / terminanda coer(avit) / b(onum) f(actum) nei quis intra / terminos propius / urbem ustrinam / fecisse velit nive / stercus cadaver / iniec(s)e velit.’ One of the *cippi* had an additional warning in red paint: ‘Stercus longe aufer, ne malum habeas.’ (‘Carry the manure off far, so that you will not suffer any harm.’) (ILS 8208; Le Gall 1980–1, 149).

³⁸ CIL VI.31614.

³⁹ Bodel 1994, 42. The Sentius *cippi* were positioned between 220 and 290 m from the Servian *agger*, corresponding to respectively 743 and 980 Roman feet.

⁴⁰ Cf. Graham 2006, 42, 68.

⁴¹ ILS 8208 = FIRA 1.53; Robinson 1975, 181; Le Gall 1980–1, 149. The prohibition in Sentius’ edict for Rome was not unique. From the city of Luceria in Puglia an inscription survives dated to about 300 BC, forbidding the dumping of manure and cadavers in a particular area (CIL I.401): ‘In hoc loucarid stircus / ne[qu]is fundatid neve cadaver / proiecita(ti)d neve parentatid / sei quis arvorsu(m) hac faxit [ceiv]ium / quis volet pro ioudicatod n(ummum) <L=I> / manum inieci(i)o estod seive / mag[i]steratus volet moltare / [li]cetod.’ (‘Do not dump manure in this wood, leave cadavers or hold funerary sacrifices. If someone will act against this in this location, any citizen who wants, can have a *manus iniectio* pro iudicatio against him of 50 pieces. Or, if a magistrate wants to fine him, it is allowed.’) Cf. Le Gall 1980–1, 151.

⁴² CIL I².591: ‘... [ar]bitratu aedilium plebeium / [quei]comque essent neive ustrinae in / eis locis re[g]ionibusve nive foci ustri/naeve caussa fierent nive stercus terra[m]/ve intra ea loca fecisse coniecisseve veli[t] ...’ (‘[The senate decreed that] by decision of the pleibeian aediles, neither permanent burning places nor temporary pyres for burning corpses should be located in these places or areas, nor that manure should be left or earth dumped inside these areas ...’).

⁴³ Bodel 1994, 47.

⁴⁴ Bodel 1994, 47. Bodel compared the inscriptions, and although the general idea of the prohibitions is the same, the construction of funeral pyres and the dumping of manure, the most important element that is missing in the *Senatus Consultum* is the ban on dumping dead bodies. He suggests that this regulation is lacking because the area was no longer used for the disposal of corpses at that time and that the Sentius *cippus* marked the end of the use of the ‘puticoli’ in the Esquiline region. In that case, the *Senatus Consultum* would have been issued after the edict of Sentius. Others have implied that the *Senatus Consultum* was of an earlier date than the edict, and that the praetor issued the edict to extend the regulations written down in the *Senatus Consultum*. For example, Graham 2006, 42.

⁴⁵ ILS 8207b: ‘Stercus intra cippos qui fecerit aut violarit nei luminibus fruatur.’ (‘May he who dumps manure inside the markers or violates them no longer enjoy daylight.’)

term problem in these cities, against which not only the local government, but also the citizens themselves had decided to act. The area near the city wall apparently was a common place for dumping waste in the ancient world. Also in Classical Athens this was a problem as there were special City Controllers (ἀστυνόμοι), who were on watch to make sure the dung carriers did not deposit manure too close to the city wall.⁴⁶

Further to these regulations concerning the dumping of rubbish, excavations on the outside of the Roman city wall of Turin in the *Giardini Reali* have actually brought to light a stratum containing large quantities of household waste, remains of food, and animal bones from the late 1st century AD to the 3rd century AD, which the archaeologists have interpreted as a rubbish dump.⁴⁷ In Turin, however, the waste dumping seems not to have been exclusively restricted to the extramural area, as similar finds were exposed in another trench, in the *Piazza Castello*, on the inside of the city wall. The Turin example would suggest that it was not necessarily considered a problem to leave waste at the city wall; after all, it was done for nearly two centuries. Even though human excrement or manure could not be identified from the archaeological record with certainty, corpses were certainly not found. Similar household waste deposits were found immediately outside the city walls of Nîmes and Aix-en-Provence in Transalpine Gaul.⁴⁸ Together with the data from Turin it suggests that the Romans clearly distinguished between ordinary household waste and more abominable refuse such as unwanted dead bodies and manure. The city wall functioned in these cases as a reference point for regulations; far beyond it the truly foul waste was deposited.

A more significant category that was considered unclean and therefore destined to the Roman extra-urban borderland were the dead. In the already mentioned inscription of Sentius we find, besides a reference to the prohibition of the dumping of manure and unwanted corpses, regulations regarding the location of funerary activities in the Esquiline area, a zone related to the

burials – or rather dumping – of the poor, as we read in Varro.⁴⁹ Also the literary sources contain references to the funerary function of the extramural borderland of Roman towns. The oldest reference in ancient literature is found in the laws of the Twelve Tables, handed down through Cicero in his treatise on the law. The original text was written down in the mid-5th century BC and read, according to Cicero:

One of the laws of the Twelve Tables says ‘no person is to be buried or cremated in the city (*in urbe*)’.⁵⁰

Even though the city wall is not mentioned explicitly in this legal source, the word *urbs*, as we have seen earlier, does seem to refer generally to the urban area enclosed by the city wall, the city proper, inside which burials and cremations were prohibited. Even though most legal references concern the city of Rome, there is also some evidence from other cities which shows that the restrictions were widespread. It is generally supposed that it was the pomerial boundary outside which burials were to take place and not necessarily the city wall. However, archaeological evidence from Rome shows that burials did take place within the *pomerium*; they remained, however, *outside* the city wall. In the Salaria region, for example, south of the current Villa Borghese Park, tombs and *columbaria* were constructed in the late 1st and early 2nd centuries AD in the area that had earlier been included by the pomerial extensions of Claudius (AD 49) and Vespasian and Titus (AD 75).⁵¹ These burials did, however, remain outside the city wall. This example seems to underline, therefore, the city wall’s role as a legal divider between the world of the living and the world of the dead.

The *pomerium*’s supposed role in allocating burial areas seems to be mainly based on the legal charter from the *colonia* at Urso, near modern-day Seville:

Nobody shall, within the boundaries of the town or colony, within the area marked round by the plough, bury or cremate a corpse, nor build a monument for a deceased person.⁵²

⁴⁶ Aristot. *Ath.* 50.2: ‘καὶ ὅπως τῶν κοπρολόγων μηδεὶς ἐντὸς ἰ σταδίων τοῦ τείχους καταβαλεῖ κόπρον ἐπιμελονται.’ (‘And they keep watch to prevent anyone from depositing ordure within a mile and a quarter of the wall.’) Cf. Owens 1983, 44–50.

⁴⁷ Brecciaroli Taborelli & Gabucci 2007, 246–7.

⁴⁸ Monteil *et al.* 2003, 124; Nin & Leguilloux 2003, 139.

⁴⁹ Varro *LL* 5.25: ‘*a puteis puticoli, quod ibi in puteis obruebantur homines*’. Bodel (1994, 41) points out the use of the imperfect, which seems to suggest that at the time of Varro this was no longer happening. Cf. Graham 2006, 64–84.

⁵⁰ Cic. *Leg.* 2.58: ‘“*Hominem mortuum*” inquit *lex in XII “in urbe ne sepelito neve urito”*.’

⁵¹ *Pomerium cippi* from Claudius and Vespasian and Titus were discovered *in situ* there and several tombs and *columbaria* were built inside the *pomerium* after both extensions. For example, the tomb of Q. Sulpicius Maximus, dated to after AD 95 and the *columbaria* in the Via Salaria area dated to the 1st and 2nd centuries AD. Cf. Platner & Ashby 1929, 487.

⁵² *Lex Urs.* 73; Campos-Carrasco 1989, 99–100.

The reference to the plough in the Urso text clearly refers to the *sulcus primigenius*, as discussed earlier, and is, in my opinion, an implicit reference to the city wall, which functions as the legal boundary of the city, and not necessarily to the *pomerium*, a boundary that could fluctuate. The regulations on funerary customs continue in the law's subsequent paragraph, where it says that it was forbidden to erect *new* funeral pyres nearer than 500 *passi* from the town, if no corpse had yet been cremated on that spot.⁵³ The description of the area where burial practices were forbidden is not *urbs*, but '*ne intra fines oppidi colon(iae)ve*'. In the case of Urso the urban setting was specified by the words *oppidum* and *colonia*; this has been interpreted as a generalization of the law and an indication that burials inside *all* cities were forbidden, regardless of their political status.⁵⁴

The city wall and the gate

The boundary crossing point was as significant as the boundary itself, as it marked the location where one moved from one sphere into another, across a border. Crossing a boundary implied change, different rules and regulations, different behaviour or, in some cases, a transgression of rules for people like the slave Asellus mentioned above. In an urban context the quintessential boundary crossing point was the city gate. City gates could, at times, function and be maintained without the presence of a city wall. The towns of Carsulae along the Via Flaminia, for example, or Augusta Bagiennorum in the Piedmont region, were founded without fortification walls. Both towns had gates indicating the towns' limits, and Augusta Bagiennorum's boundary was additionally demarcated by four towers.⁵⁵ In Rome, the emperor Augustus restored some of Rome's city gates that belonged to the 4th century BC wall towards the end of the 1st century BC, but paid no attention to the wall itself.⁵⁶ That was remarkable as by then the so-called Servian wall was a far from closed circuit and played no apparent role in the emperor's urban reforms of

7 BC.⁵⁷ One explanation for Augustus' interest in the continuation of the gates and their upkeep could be their importance as Rome's customs stations. As the city gate was a transition point, it was also the perfect check point for things such as merchandise. The reconstruction of the Servian city gates in the Augustan period into 'gateway arches' has also been interpreted as a propaganda statement: Rome no longer needed fortifications and its vigorous reputation was enough to protect the city.⁵⁸

Outside Rome, in Saepinum, a further reference to a city as a customs checkpoint can be found. On the outside of the northern city gate, the so-called Porta Boiano, a late Antonine inscription was found referring to a mistreatment of transhumant shepherds, who passed through the city with flocks of sheep on their way to the Abruzzo hills.⁵⁹ The shepherds had been abused by the city's *stationarii*, fiscal officers, which had caused a loss to the Fiscus. The inscription, dated to AD 169–72, contains a reprimand from the Praetorian Prefects who threatened with an investigation and possibly even punishment of the officers.⁶⁰ The inscription suggests that the Porta Boiano served as a customs station, possibly from the moment when the city's fortifications and gates were erected between 2 BC and AD 4, or even from as early as the beginning of the 1st century BC when the city was founded along an important transhumant route.⁶¹ Imperial officials put up the inscription once they became involved with the scandal at Saepinum. They had the text carved on the outside of the gate, presumably close to the customs office, as a constant warning and reminder for the officers.

Besides a good location for control of various kinds, city gates were also the points where the city boundary was most vulnerable. Gates were not only literally a gap in the city's defences, but as discussed above, during the *sulcus primigenius* the plough share was lifted at the location where a gate was planned. As a result, the gate was not protected by the ploughing ritual.⁶² The Romans were aware of the gate's vulnerability and they not only put human guards at the gates to protect the city, but had

⁵³ *Lex Urs.* 74: '*Ne quis ustrinam novum, ubi homo mortuus / combustus non erit, propius pas / sus D facito.*'

⁵⁴ Goodman 2007, 62.

⁵⁵ Gros 1992, 221.

⁵⁶ Augustus restored the Porta Carmentalis (after 12 BC), the Flumentana (after 12 BC), the Caelimontana (10 BC) and the Trigemina (*terminus ante quem* of 3–2 BC).

⁵⁷ Palmer 1980, 217; Frézouls 1987, 374; Panciera 1999, 10.

⁵⁸ Haselberger 2007, 230; cf. Gros 1996, 29–30.

⁵⁹ *CIL* 9.2438.

⁶⁰ Corbier 1983, 126–8.

⁶¹ *CIL* IX.2443; Gros 1996, 41; Tammaro 2004, 10–11.

⁶² *Cic. Div.* 1.17.33.

a variety of protective gods and goddesses overlooking the gates and the passers-by.⁶³ In Saepinum, for example, we find the gods Mars and Hercules depicted on the keystones of, respectively, the Porta Boiano and the Porta Benevento, both looking outwards.⁶⁴ In Falerii Novi⁶⁵ the god Jupiter was guarding the city facing out, and Minerva kept an eye on the passers-by in Pompeii at the Porta di Nola, looking inwards.⁶⁶ In some cases we find even more than one 'gate watcher'. In Volterra, for example, three heads face outwards above one of the city gates, which have been interpreted as Jupiter and the Dioscuri.⁶⁷ There are also examples of full body guarding deities, such as the statue of a winged Minerva at Ostia, where she stood as a *custos urbis* on top of the eastern city gate, the so-called Porta Romana.⁶⁸ Instead of a protecting deity we also find apotropaic phallic symbols, as for example on the right side of the western city gate in Alba Fucens and the northern gate of Saepinum.⁶⁹

The aesthetic city wall

The previous paragraphs explored the ritual origins of the city wall and its role as a socio-legal and economic divider. In addition to these aspects, the physical appearance of city walls could represent yet another symbolic function of fortifications.⁷⁰ This paper started with a quote of Rutilius Namatianus who described Luni's 'glittering' fortifications.⁷¹ One could wonder what walls Namatianus actually saw in the late 4th or early 5th century, but Frova and Rossignani suggested his description implied that marble was used in the construction.⁷² Even though white marble was to be found locally at Luni – the famous Carrara marble quarries were close by – it was still considered a rather precious building material. Enhancing city walls aesthetically could possibly substantiate a town's importance and status, impressing those approaching the city.⁷³

An exploration of city walls constructed in the Augustan and Julio-Claudian period, a relative peaceful period in the Roman Empire when defence was not a town's priority, may shed additional light on this particular use of city walls. Despite the relative peace during the *Pax Augusta*, when one would expect a decline in city wall construction, the period saw, in fact, an unprecedented activity of city wall building, not only in Italy but also in southern Gaul and Hispania, a phenomenon already noted by Pierre Gros.⁷⁴ This would seem rather unusual, but the construction of fortifications in this period should be seen in a larger context of urban adornment and monumentalization by Augustus.⁷⁵ Well-known examples of newly founded Augustan *coloniae* fitted with walls are *Augusta Praetoria*, modern Aosta, and *Julia Augusta Taurinorum*, modern day Turin. There does not seem to have been any hurry in the construction of the fortification walls of these colonies as excavations have shown that Turin's city wall was not finished until the third quarter of the 1st century AD, a feature that was also observed in the nearby colony at Aosta.⁷⁶ The excavators believe that the work on the walls was delayed because of the financial strain its construction put on the population of the cities. This would suggest that, even though Augustus founded both colonies, he did not necessarily pay for the fortifications. The slow pace with which the walls in both cities were constructed does, however, illustrate that there was no direct need for defence walls and that they were primarily decorative. Moreover, the Porta Praetoria in Turin, with its many windows and constructed in elegant brickwork, can hardly be considered defensive and would substantiate the ornamental emphasis of its fortifications (Fig. 3).

The chosen building techniques and materials of city walls can also point towards an aesthetic character. An example is Aosta's city wall, which had an outer facing of neatly cut travertine blocks, a stone which does not

⁶³ Van Gennep 1960, 21–2.

⁶⁴ Tammaro 2004, 14–15.

⁶⁵ Gros 1996, 34 fig. 14; De Lucia Brolli 1999, 22.

⁶⁶ Mau 1908, 248.

⁶⁷ Pasquinucci & Menchelli 2000, 49–50.

⁶⁸ Von Hesberg 1998, 374–5; Zevi 2004, 30–1.

⁶⁹ De Visscher & De Laet 1950, 278 fig. 26; 284.

⁷⁰ Gros 1992, 220–1; Adam 2007, 29–30.

⁷¹ Rutilius Namatianus 2.63.

⁷² Frova & Rossignani (1985, 43) do point out the fact that the word *moenia* could refer not only to city walls, but also to walls of buildings or even to the overall image of a city in general. As Namatianus refers to *moenia* while he swiftly approached the city, the walls would have been the first and most prominent structure he would have noticed. It would therefore seem likely that his *moenia* are Luni's fortifications.

⁷³ Gros 1992, 220; Von Hesberg 2005, 73–4.

⁷⁴ Gros 1996, 39.

⁷⁵ Cf. Zanker 2000, 32.

⁷⁶ Torelli 1998, 38; Brecciaroli Taborelli & Gabucci 2007, 246.



Fig. 3 The Porta Praetoria at Turin (author's photo).



Fig. 4 The travertine clad city wall of Aosta (author's photo).



Fig. 5 Detail of the mosaic-like patterns in the facing of the north-western tower of Cologne's Roman fortifications (Germany). (Author's photo).

seem to have been local (Fig. 4).⁷⁷ From Cologne in Germany we have a later example of decorative features to fortifications (Fig. 5).⁷⁸ The north-western corner tower of the town's Roman city wall has geometrical decorations in different coloured natural stone on the outside.⁷⁹ The carefully arranged patterns and the use of different materials surely added an aesthetic touch to the city's defence system. Another example often mentioned in this context is the city wall from Fréjus, Roman *Forum Iulii*, in southern France. The 1st-century AD city wall was constructed of a local green, yellow and red stone.⁸⁰ For a long time it was believed that various sections in *opus reticulatum* were inserted into the exterior surface of the city wall, using the multi-colour building stones that resulted in colourful mosaic patterns. Research has shown, however, that the wall containing the *opus reticulatum* mosaic did not, in fact, belong to the fortifications, but was part of a substructure that supported an urban villa from the Augustan period.⁸¹

Besides cities founded *ex novo*, existing Roman cities were given fortifications in this period. Saepinum, founded at the beginning of the 1st century BC was given a wall and gates by Tiberius between 2 BC and AD 4⁸² and Augustus financed the fortifications of Fanum Fortunae built in AD 9.⁸³ Saepinum and Fanum Fortunae are the last known cities in Italy that received city walls before the urban refortification wave of the 3rd century AD. The reason for the imperial interest in Saepinum might have been its position along the important transhumant route from Rome to the Abruzzo hills. From an inscription, already discussed earlier, imperial flocks of sheep seem to have passed through the city in the late 2nd century AD.⁸⁴ This might have happened already as early as the Augustan period. Gates and walls might have been donated to the city as a status symbol to recognize its growing importance along the transhumant route.

The symbolism of Roman city walls

An exploration of ancient literary sources, epigraphic and archaeological data has shed a light on the often less expected side to city walls: their symbolic role. One of the most significant origins of the symbolic nature of city walls was the Roman urban foundation ritual, the *sulcus primigenius*. The city wall was apparently considered an intrinsic characteristic of a Roman city and according to the foundation ritual it was one of the first material features present in a newly founded city and closely linked to the *pomerium*, a town's ritual boundary. Based on the depiction of the foundation ritual in various media, one could even think of the ritual, and the wall resulting from it, as a sort of Roman urban quality label. Resulting from the *sulcus primigenius* was the special legal status of city walls, they were *res sanctae*, structures that were not to be violated. This particular status, together with a city wall being an immense and very prominent structure, made the city wall an ideal point of reference, especially in legal matters. As such, city walls could function as structures of inclusion and exclusion in various legal matters. Simultaneously, the area near the city wall, which can be identified as the urban borderland, often seems to have been a marginalized zone, a sort of urban wasteland, where illicit activities took place and that was used for the dumping of unwanted waste, including human cadavers. To some extent this negative connotation of the city wall area was due to its role as a legal divider between the world of the living and the world of the dead, the latter of which were destined to the extra-urban borderland. On the other hand, unwanted entities tended to be left on the edges of society, a phenomenon we can recognize even today.

Nonetheless, city walls were structures that were highly visible from afar and probably one of the urban features a visitor would notice first on approaching a city. City walls could be part of the urban adornments and particularly

⁷⁷ On the walls of Aosta: Pupilli 1981, 68; cf. Goodman 2007, 60.

⁷⁸ The dating of Cologne's walls has recently become the topic of discussion. While some scholars still follow the traditional date of the late 1st century AD (for example, most recently Alfred Schäfer (2012, 557)), Ulrich-Walter Gans (2005, 217–22) argued that the walls, including the tower, should, in fact, be dated to the 3rd century AD based on a review of the stratigraphic evidence and a new interpretation of the parallels on which the dating depended, such as Fréjus.

⁷⁹ Süßenbach (1981, 87–90) mentions as a parallel the decorative patterns in *opus reticulatum* from Pompeii and links the Cologne mosaics to that same building technique. The natural stones are limestone, sandstone, greywacke and trachyte.

⁸⁰ Grenier 1931, 308–9, fig. 67; Bidwell 1996, 23–4.

⁸¹ Rivet *et al.* 2000, 251, figs 450, 456. Süßenbach (1981, 87–90) for example, still refers to Fréjus as a parallel for Cologne's wall mosaics.

⁸² *CIL* IX.2443; Tammaro 2004, 10–11.

⁸³ *CIL* XI.6218–19; Gros 1996, 41.

⁸⁴ Corbier 1983, 128. The fact that high government officials got involved in the Saepinum problem would substantiate this idea.

the examples discussed in this paper, dating to the Julio-Claudian period, were not about defence or deterring the enemy, but to advertise a city's status, wealth or imperial benefaction. These aspects were furthermore not only reflected by the, at times, decorative building technique and style of the walls, but also by the chosen building materials, such as travertine and, in the case of Luni, even marble. Judging from Namatianus' description, it was particularly this aesthetic aspect of the city wall that made a lasting impression.

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THE FORTIFICATION OF SECONDARY SETTLEMENTS IN LATE ROMAN GAUL

Melanie Jonasch

Abstract

At the end of 4th century AD the landscape of the Gaulish and German provinces was dotted with dozens of fortifications of civil and military purpose. While the Pax Romana of the first centuries AD allowed settlements of every kind to subsist and flourish untroubled, the adverse circumstances of the 3rd century triggered a slow but fundamental change in the organization of the living environment. One of the most striking new elements of the human landscape were the numerous fortifications that were built not only alongside the borders and in the capital cities, but also in more remote and rural regions.

The restructuring of central towns and urban centres by the erection of mostly reductive wall circuits largely follows the same principle. It is a more complex matter to present the fortification measures in rural areas, especially when we consider on whose initiative and with what financial resources such building projects were carried out. This short study of a series of late Roman wall circuits, located alongside the trans-regional road from Lyon to Langres, aims primarily at demonstrating the varying functions of small-scale fortifications in a non-urban context. It also invites discussion of the factors which led to such structural change in the human living environment, and raises questions about the possible agents behind the various building projects.

The phenomenon of late Roman urban defences in the Gaulish and German provinces is closely linked to the ongoing discussion about the 3rd-century crisis and the profound political and structural transformations of Late Antiquity.¹ The extensive demolition of early Imperial monumental structures and the drastic shrinkage of the urban settlement area draws a *prima facie* picture of public

emergency and population decrease.² But comprehensive research in recent decades has made it possible to abandon the idea of urban fortifications being a mere panic reaction to external threat and internal weakness.³ The complex process of the transformation of the urban image between the 3rd and the 6th century AD nevertheless remains a disputed matter,⁴ and the often scarce archaeological

¹ Liebeschuetz 2001, 11–19; Liebeschuetz 2007, 17–18; Witschel 1999, 307–37; Witschel 2008, 47–56; Christie 2011, 102–5; Loseby 2006; Bachrach 2000.

² Christie 2000, 56–9; Christie 2011, 107; for the region in question see Hostein & Kasprzyk 2012, 529–31.

³ For further bibliography see Witschel 2008, 10 n. 6; Dey 2012, 295–6 n. 13, 15.

⁴ Bachrach 2000; Dey 2010; Dey 2012.

evidence coming from the walls as well as from the city structures leaves much space for interpretation.⁵

Less attention, however, has so far been paid to the fortification of secondary settlements,⁶ at least in relation to matters of function, organization and change in the living environment. Although a closer look at the dozens of small-scale wall circuits which sprang up all along the central roads and in the hinterlands of the Gaulish provinces can usefully balance the lopsided image created by the restrictive defences of the main cities.⁷

Understandably, some secondary fortifications of the 3rd and 4th century AD were erected around settlements of particular commercial relevance, at road stations bordering the trans-regional roads and of course at militarily significant points. Less comprehensible, by contrast, is the building of defence systems of uncertain function in rural areas that were sometimes built in sparsely developed areas in the proximity of early Imperial structures of a different kind. These often imposing monuments did not necessarily surround any previous settlement area and their interior frequently remained undeveloped for a time while life continued to be centred in the surrounding facilities. There were undoubtedly more motives for building fortifications than the simple protection of men, beasts and goods. The recently much invoked aspect of civic self-display must naturally be considered, even though this phenomenon is more difficult to apply to small-scale wall circuits in agrarian-oriented, remote areas. Closely linked to the question of function is the issue of planning and financing, especially when there apparently was no military or commercial benefit. It is therefore necessary to investigate who profited from such an ambitious undertaking. The continued development of nearly all these fortified secondary settlements until well into modern times finally leads to the question of their role in the transitions of rural establishments from late Antiquity into the Middle Ages.

Secondary fortifications between Langres and Lyon

A series of settlements strung along the trans-regional road from Lyon to Langres shall serve to demonstrate the varying manifestations of late Roman fortifications, in

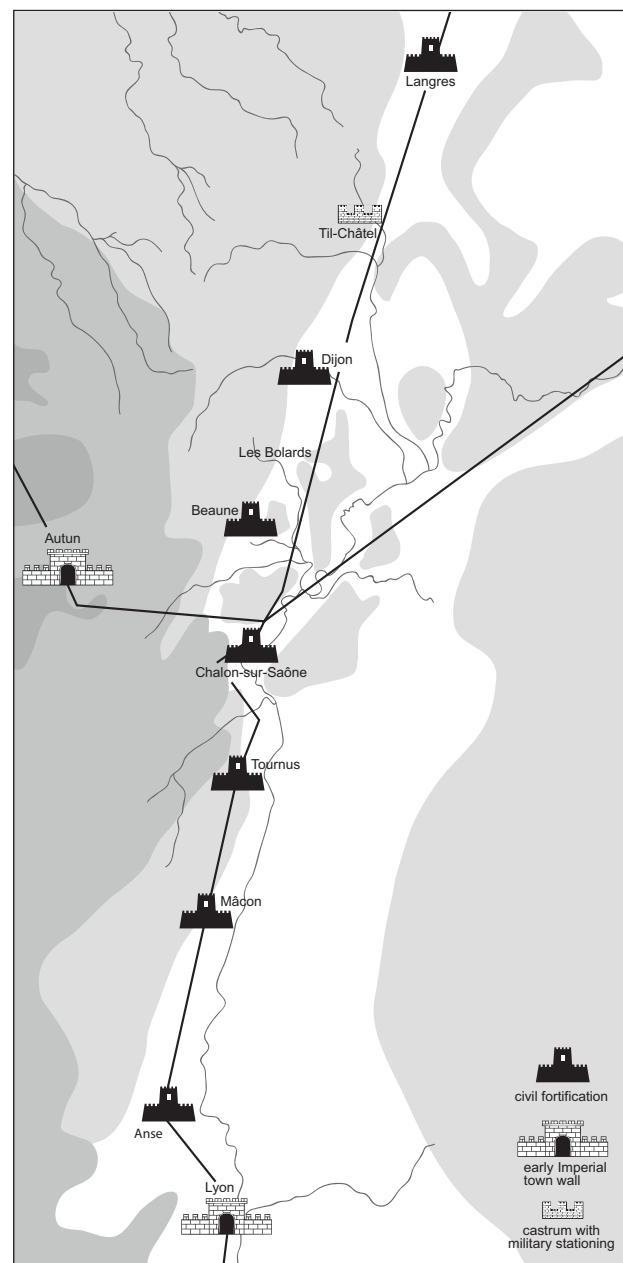


Fig. 1. Position of the late Roman fortifications alongside the trans-regional road from Lyon to Langres (~ 300 km) (M. Jonasch).

a non-urban context (Fig. 1). Over a distance of 300 km, eight sites with different primary functions, social backgrounds and subsequent development are known to have acquired a protective wall circuit sometime between the late 3rd and late 4th century AD.

⁵ For a general overview of the status quo in the archaeological and historical research on the city in transition see van Ossel 2011.

⁶ These include all kinds of settlements that are subordinate to the civitas' urban centre in political and administrative matters.

⁷ For an overview see Johnson 1983, 83 fig. 25.

As regards the building typology, however, they are all in line with the 'new design in late Roman town defences',⁸ characterized by a thick curtain wall with small-scale stone facings, filled with rubble and liquid mortar. The foundations consisted mostly of bigger blocks robbed out from earlier local settlement or necropolis structures. Projecting towers of different shape, spaced irregularly, reinforced the wall, and small gates provided access to the settlement's interior. A prominent feature of these late Roman walls was the decorative brick bands in the outer facing, which frequently appeared without any constructive purpose.⁹

The following examples are all located in modern Burgundy and belonged in early Imperial times to the provinces of Gallia Lugdunensis and Germania Superior.¹⁰ The civitates of the Aedui and the Lingones were the basic administrative districts throughout the whole Imperial period in the region discussed. One of the so-called *Viae Agrippae* was the key structural feature between the fertile plain of the Saône in the east and the impressive limestone massif of the Côte d'Or in the west. The road from Lyon to Trier was built in the late 1st century BC to facilitate troop movement and goods traffic across the Rhine border, but it only expanded the capacity of the already existing road system along the natural route.

Since Lyon and Langres were both primary settlements of considerable size, they will not be the focus of attention in this discussion. It is striking, however, that until now no archaeological evidence allows for the reconstruction of a town defence for the colony of Lyon, whether of early Imperial or late Roman times.¹¹ Langres on the other hand acquired a wall circuit during the 3rd century AD that covered a small portion of the former city's area on the naturally protected promontory.¹² The fortification of

Langres is quoted in Eutropius' record in the context of the battle between Constantius I and Germanic invaders at the end of the 3rd century.¹³ The story of Constantius, who had to be hoist over the wall with a rope in trying to escape the approaching enemy, is the only available dating criterion and serves as a *terminus ante quem* for the construction of the wall. The remains of the defence system are, however, scarce and do not provide sufficient information for a reliable reconstruction of the course of the wall and its appearance.¹⁴ No traces of the internal organization, either of the early Imperial city or of the fortified town, allow for any conclusion on possible changes in the urban arrangement.

On the way from Lyon to Langres the first fortified settlement lies c. 20 km north of the provincial capital. The Roman *Asa Paulini*, today's Anse, is known as a road station from the *Itinerarium Antonini*.¹⁵ The best preserved monument of the ancient settlement is its small wall circuit dating most probably to late Imperial times (Fig. 2).¹⁶ Before the fortification was built, the place consisted of a series of villas and isolated hamlets gathered around a modest road station with a central necropolis (Fig. 3).¹⁷ The oval shaped fortification was erected midway between the Roman estates with a 3 m thick curtain wall, which encircles an area of roughly 1.3 hectares. The foundations were made of large stone blocks including re-used parts of older monuments, while the upper part consisted of rubble stones of small size, broken up by decorative brick bands at varying distances. Two gates allowed the transit traffic to enter, one in the south-east and one in the north, and 15 round towers flanked the wall at varying intervals. Still visible today is the north-western gate and several parts of the curtain wall. By contrast, there is no evidence on how the interior of the fortification was organized at any time before the

⁸ Johnson 1983, 31–54.

⁹ The brick bands did not penetrate the rubble-filled space between the two wall shells to ensure their connection.

¹⁰ With Diocletian's reforms they were subsumed in the *Lugdunensis Prima* and the *Dioecesis Galliarum* respectively.

¹¹ Besides ambiguous observations in the early 19th century, there are neither remains of an early Imperial wall nor traces of a defence system of later times, see: CAG 69/2, 322.

¹² For the site in general see CAG 52/2; Frézouls 1988, 277–421; Journaux 1988. The ratio of the early Imperial city area to the fortified town is 70 to 20 hectares.

¹³ Eutropius 9,23.

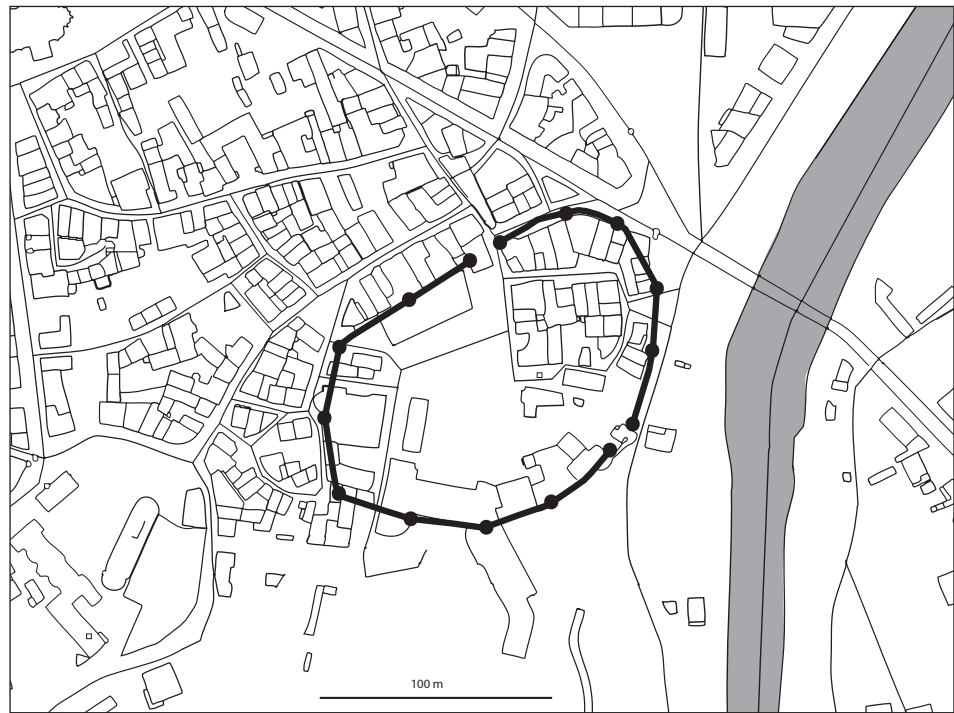
¹⁴ The few observations that were made during construction works in the last centuries suggest a more than 3 m thick double wall, made of large-scale blocks and spolia, see CAG 52/2, 51–5 figs 34, 37; Journaux 1988, 61, figs 17, 66. There is no clear evidence for the design of the upper wall or the towers.

¹⁵ CAG 69/1, 131–46.

¹⁶ Gruyer 1984; CAG 69/1, 137–40. No stratigraphic evidence allows for the dating of the fortification. The written reference in the *Itinerarium Antonini* suggests, however, the relative importance of the road station in the 3rd century AD. The contemporary decline of the adjacent road station of Ludna (Saint-Georges-de-Reneins) may also point to *Asa Paulini* being the region's main transport hub from the late Roman period onwards.

¹⁷ CAG 69/1, 132 fig. 20. Particularly prominent among the farmsteads is the villa of La Grange-du-Bief about 800 m to the south of the fortified area, dating from the 1st to the 3rd century, see CAG 69/1, 146–60.

Fig. 2 Reconstructed course of the late Roman wall circuit over the modern townscape of Anse (M. Jonasch).



Middle Ages.¹⁸ Most of the isolated settlements in the surrounding area do, however, survive at least into the 4th century AD.¹⁹

A similar situation, but on a much larger scale, can be observed c. 50 km to the north in the area of the late Iron Age oppidum Matisco, nowadays Mâcon.²⁰ Only limited information is available about the nature of the settlement in Roman times, but there is reason to believe that the plateau with the Celtic oppidum was abandoned in the early 1st century AD, and only repopulated in the 4th century AD. The amenities of the early Imperial period seem to have been confined to the sections east and west of the oppidum's plateau.²¹ Although the archaeological remains do not allow for the reconstruction of public buildings or even for the location of such structures, the dense population and presence of several inscriptions seem to suggest the continued existence of a locale with sacral installations and administrative function.²² At an unknown point in time, possibly during the later 3rd century AD, there is once more a substantial change in the organization of



Fig. 3 Location of the fortification of Asa Paulini/Anse in relation to the early Imperial structures in the surrounding area (M. Jonasch).

¹⁸ Gruyer 1984, 321 argues on typological grounds for the stationing of a small garrison in the place, but there is no archaeological evidence at all for any kind of military stationing.

¹⁹ For example the above cited villa of Grange-du-Bief, CAG 69/1, 146–60. A high density of Merovingian sites follows.

²⁰ CAG 71/4, 300–20; Kasprzyk 2005, vol. I, 195–219.

²¹ Kasprzyk 2005, vol. I, 296–7 counts three villae and 28 smaller rural establishments.

²² CIL XIII 2584 quotes a *sevir augustalis* and a *libertus*. CIL XIII 2583, 2585 names a *duovir* and *flamen augustalis* and also a *gutuater*.

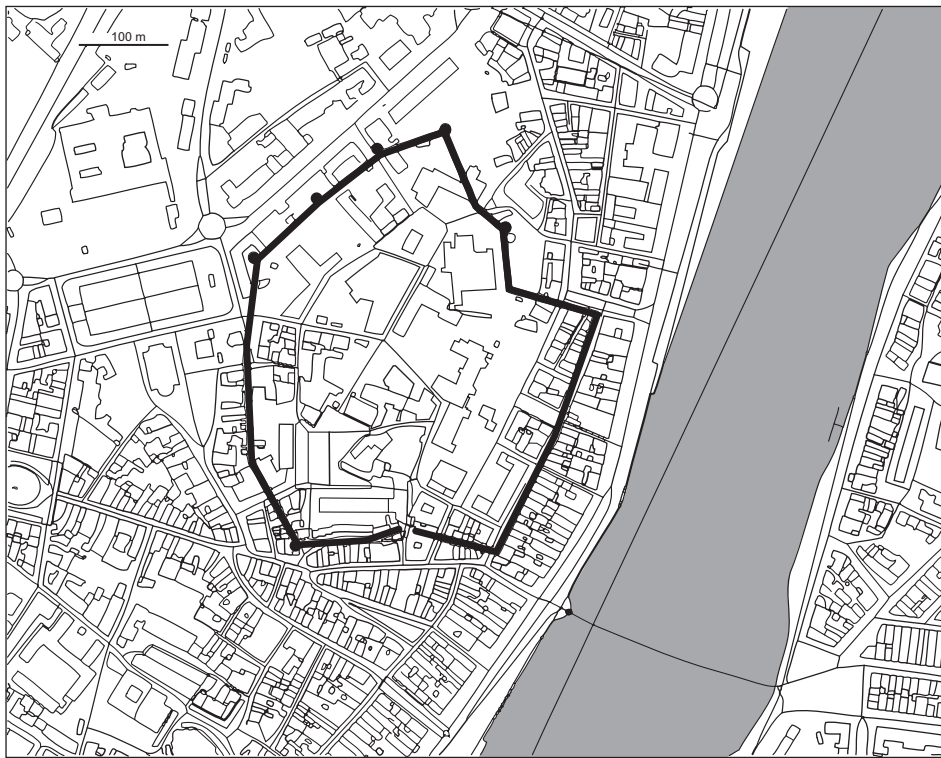


Fig. 4 Reconstructed layout of the late Roman town defence of Matisco/Mâcon against the background of the modern townscape (M. Jonasch).

the settlement. Structures in the lowlands are largely abandoned, while a fortification is erected in place of the oppidum on the high plateau.²³ The course of the wall, surrounding not only the plateau but also a part of the riverbank, has only been clarified recently (Fig. 4).²⁴ An area of roughly 10 hectares was circumscribed by a rather narrow wall with round towers, both apparently embellished with bands of red brick.²⁵ No traces of gates have been found to indicate the course of the trans-regional road, and it is not certain that it would have crossed the fortified area. The interior of the wall does not appear to have contained durable structures until the mid-4th century AD.²⁶ Near the plateau several rural establishments continued to survive well into the 5th century.²⁷ Unlike the modest fortification at Anse, the large-scale building project at Mâcon contrasts with the

scanty evidence of the early Imperial settlement. The installation of an arrow workshop at the latest in the 4th century AD might, however, have played a role in the choice of the position and layout.²⁸ The settlement of the 5th century grew within the limits specified by the wall circuit and became a diocesan town after the fall of the first kingdom of Burgundy in the 6th century AD.²⁹

Roughly 30 km north of Mâcon in the area of modern Tournus is another small-scale fortification located alongside the trans-regional road.³⁰ Again the early Imperial settlement seems to have been composed of isolated and at times well-equipped farmsteads,³¹ at a slight distance from the road and river. Some unspecific remains of Roman building structures might have been part of a small road station, known as Tinurtium in

²³ Jeanton 1933; Barthélemy 1996. Once again there is no stratigraphic evidence for the dating of the building. The phases of use datable to the mid-4th century coming from the interior of the wall circuit can, however, serve as a terminus ante quem.

²⁴ Remy *et al.* 2001.

²⁵ Kasprzyk 2005, vol. II, 300–1. The decoration consisted of bands, three bricks high, in the outer facing of the wall. For the foundations limestone blocks from previous structures were re-used, among which the above mentioned *CIL* XIII 2584 was the only one bearing an inscription.

²⁶ Remy *et al.* 2001, 27.

²⁷ Kasprzyk 2005, vol. II, 304–6.

²⁸ *Not. Dig.* 9: *Fabricae infrascriptae: Matisconensis sagittari.*

²⁹ Kasprzyk I 2005, 208–9.

³⁰ *CAG* 71/4, 460–8; Kasprzyk 2005, vol. I, 224–32; Kasprzyk 2005, vol. II, 342–8; Saint-Jean Vitus 2006.

³¹ For example the villa de Belné, *CAG* 71/4, 464–5.

the *Itinerarium Antonini*, and as Tenurcio in the *Tabula Peutingeriana*.³² The nearly rectangular fortification was built at an unknown point in time, integrating the main road and an area of not more than 1.5 hectares (Fig. 5).³³ The small area is surrounded by an impressive curtain wall, c. 4 m thick, and of roughly rectangular plan with round towers at the angles and semi-circular towers along the wall.³⁴ Remains of Roman structures were detected inside the fortification, but as at Anse and Mâcon there are no traces of a deliberate inner organization before late Antiquity. Yet there is literary evidence from a medieval source about the life of Saint Valérien, which cites that Trenorchium was a *horreum* for the storage of the *annona militaris*.³⁵ This definition is indeed appealing when we come to scrutinize the function of such a tiny fortification in a strategic position, bordering both a central road for troop movements and a navigable river.³⁶

The *annona militaris* was introduced by the Severans as an extraordinary tax for the provisioning of the troops but became a regular charge only with Diocletian's reforms.³⁷ The new system of taxation required regional authorities for individual tax assessment and might have also been linked to an upgrading of the infrastructure.³⁸ In a speech of thanks to Constantine made in AD 311, a native from the capital city of the Aedui, Augustodunum, refers to the bad state of the road leading to the site of Chalon-sur-Saône which drastically impeded transport of the obligations to what seems to have been a central collecting point in the area.³⁹ Even if it is not reasonable to argue that Tournus served as a collection point for the *annona militaris* of the whole Aeduan territory, it might have been one element in the broader strategy of the new tax system. If the building did indeed serve as one link in the military supply chain of Tetrarchic times, the fortification dates at the earliest to the end of the 3rd century AD.

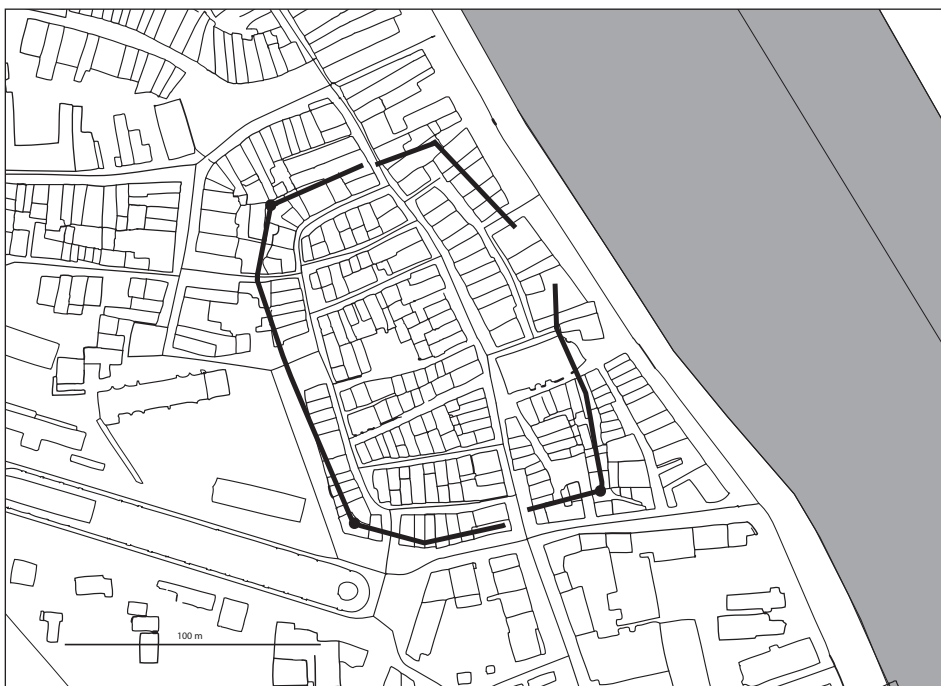


Fig. 5 Approximate course of the late Roman fortification of Tenurcio/Tournus against the background of the modern town-scape (M. Jonasch).

³² Mentioned as *Castrum trinorciense* by Gregory of Tours, *Liber in Gloria Martyrum*.

³³ Saint-Jean Vitus 1996; Jeanton 1920.

³⁴ Knowledge about the composition of the wall is still rather limited. The wall was in any case constructed from small-scale rubble stone without visible traces of decorative brick bands.

³⁵ *Passio Valeriani 2: Trenorchium, quod tunc in erogandis militum annonis horreum castrense vocabatur.*

³⁶ Kasprzyk 2005, vol. I, 231–2. It must be specified, though, that there is no proof of *horrea* buildings as known from the military forts on the front line, see Rickman 1971, 213–70.

³⁷ Mitthof 2001, 65.

³⁸ See for instance the studies of Fernández Ochoa *et al.* 2011 on northern Spain.

³⁹ Paneg. 5, 7; Nixon & Rodgers 1994, 276–7, on the question of the road see esp. note 36. As to the political implications of the speech see Hostein, 2012, 254–63; Kasprzyk, forthcoming.

Closely connected to the question of the *annona militaris* is the issue of military stationing and troop movement in the region concerned. Relevant in this respect is the city of Chalon-sur-Saône, roughly 30 km to the north of the so called *Castrum trinorciense*. Inscriptions prove the presence of military personnel already in the early Imperial period.⁴⁰ In the 4th century a fleet commander is attested in town and several sources prove prominent troop movements in the area especially in the 4th century AD.⁴¹

Like the oppidum Matisco, the ancient Cabillonum was already an important centre and the major port of transshipment of the region in the Iron Age.⁴² Unlike its southern neighbour, the oppidum not only survived into Imperial times, but saw its role strengthened by the building of the trans-regional roads. Yet its political and administrative status remains unknown until the mid-5th century AD, when Cabillonum seems to have been promoted to *civitas*.⁴³

Equally unknown is the exact moment when the town wall, surrounding an area of about 13.5 hectares adjacent to the river course, was erected.⁴⁴ (Fig. 6) Since a *castrum* at Cabillonum is mentioned by Ammianus Marcellinus in the context of the military campaigns of the year AD 354, a dating of the defence system to the late 3rd or early 4th century can, however, be assumed.⁴⁵ The fortification consisted of a 3.5 m thick curtain wall with three decorative brick courses on its outer façade, a series of round towers, and three gates where the major roads were located.⁴⁶ Of particular interest are two projecting walls with towers leading from the southern façade of the wall circuit down to the river. This area seems to have been designed for the protection of commercial goods or naval vessels. Despite the restriction of the settlement area, the success story of Cabillonum continued uninterrupted. Already in the *Notitia Galliarum* of the late 4th century the *Castrum cavalonense* is cited among the main cities of the province and seems to have been an episcopal see by the same time.⁴⁷

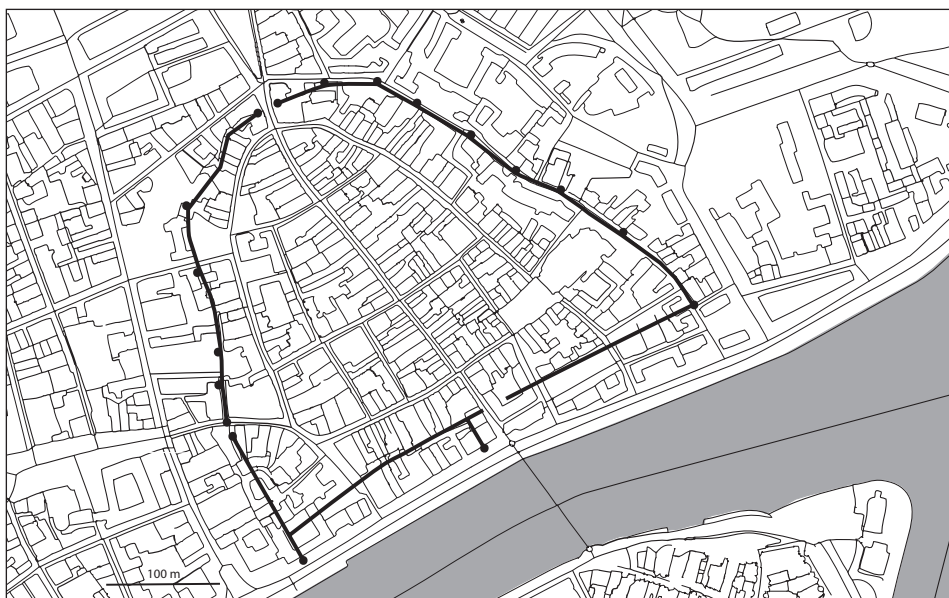


Fig. 6 The restrictive late Roman town defence of Cabillonum/Chalon-sur-Saône against the background of the modern townscape (M. Jonasch).

⁴⁰ CIL XIII 2603, 2613, 2615.

⁴¹ A *praefectus classis* is listed in the *Notitia Dignitatum* 42, 20–1. Constantine collects his troops in Cabillonum when pursuing Maximian to Marseille in AD 310, see Paneg. 6, 18. In 354 the Roman army is assembled in Cabillonum when Constantius II took the battle to the Alemanni, see Amm. 14.10.3–5.

⁴² CAG 71/3, 124–61; Bedon 2001, 135–7; Armand-Calliat 1937.

⁴³ For a discussion of the date see Kasprzyk 2005, vol. I, 67–8.

⁴⁴ The early Imperial city seems to have expanded in several sections over a surface of more than 60 hectares. There is no evidence for the continuity of residential or commercial activity outside the fortified area in the aftermath of the building measure.

⁴⁵ Amm. 14.10.5.

⁴⁶ Niepce 1847, 10–19.

⁴⁷ Kasprzyk 2005, vol. I, 67–8.



Fig. 7 Course of the late Roman wall-circuit against the background of the modern townscape of Beaune (M. Jonasch).



Fig. 8 Location of the late Roman fortification of Beaune and the early Imperial road station at La Maladière by the side of the trans-regional road from Autun to Besançon (M. Jonasch).

30 km north of Chalon-sur-Saône lies yet another small-scale fortification in the fertile plains between the river Saône and the limestone massif of the Côte d'Or. The street plan of the modern small town of Beaune⁴⁸ still clearly reveals the course of the late Roman fortification which was most probably built sometime between the end of the 3rd and the mid-4th century AD (Fig. 7).⁴⁹ As already seen elsewhere, the population of early Imperial times was resident in scattered farmsteads throughout the fertile plain and in the hills of the Côte d'Or.⁵⁰ A minor road station was situated not alongside the trans-regional road to Langres, but at the edge of a direct connection between Autun and Besançon (Fig. 8). This small establishment seems to have been used at a low level from the late Iron Age to the 6th century AD.⁵¹ The re-used tombstones and building components enclosed in the foundations of the later wall indicate a certain prosperity in the area, although this was not a monumental centre with public buildings and prominent cultic sites.⁵² The late Roman wall circuit appears roughly

⁴⁸ CAG 21/2, 47–59; Thévenot 1971; Kasprzyk 2005, vol. I, 224–32.

⁴⁹ Since the *Castrum belnense* is mentioned for the first time on a coin of the 7th century, its dating can only be based on the archaeological remains found in the context of the fortified settlement. Of particular relevance is a necropolis of the 5th century outside the wall circuit and traces of use from the 4th century AD coming from inside the wall. As yet, no stratigraphic dating relating to its construction is possible.

⁵⁰ According to the *Paneg.* 5, 6 the area around Beaune, known as *Pagus arebrignus*, was already a well-known wine growing area in the 2nd and 3rd centuries AD, see Nixon & Rodgers 1994, 275 n. 32.

⁵¹ Kasprzyk 2005, vol. II, 40; Charlot 1991.

⁵² Affre 1894. A large part of the spolia came from a sepulchral context, like most of the sculptured stone found within the wider environment.

2 km to the south of the modest road station and 10 km to the west of the trans-regional road on apparently undeveloped land.⁵³ The semi-circular wall, 4 m thick and more than 8 m high, enclosed an area of 1.6 hectares and consisted of the characteristic small-scale masonry. Despite the impressive scale of the structure there is no evidence of decorative brick courses in the outer façade, as seen in previously mentioned fortifications. Little is known about the location of gates and towers⁵⁴ and even less about the organization of the interior.

The execution of such an immense building project in this infrastructural rather sparsely developed area is all the more striking when compared with the history of the nearby settlement of Les Bolards. The remains of this impressive Roman site that grew up all around an Iron Age sanctuary were excavated about 15 km to the north of Beaune (Fig. 1). The settlement with an area of c. 15 hectares was equipped with a grid street plan, convenient housing and artisan quarters.⁵⁵ In the 3rd century AD a process of slow abandonment began with no archaeological evidence to suggest any violent reason for the withdrawal of the population. Furthermore there seems to have been no attempt to retain the inhabitants by reorganizing the settlement, for instance through the building of a fortification. It is obvious that the site was abandoned completely when Christianity took over the region in the course of the 4th and 5th century. Yet it is deeply pertinent for our understanding of the transformation of the human landscape, that neither the local community nor the supra-regional administration saw any cause to counteract the decay of the well-developed settlement in the crucial period of the 3rd and early 4th century AD.⁵⁶

The last civil fortification on the way to Langres takes us to the adjacent administrative district of the Lingones. Dijon, the ancient Divio and nowadays capital city of Burgundy, was already a remarkable road station bordering the military road from the early Empire onwards.⁵⁷ It was the setting for a vast necropolis with

plenty of high quality sculptures. Though no foundations of specific structures were detected underneath the dense modern development, the spolia found in the wall circuit suggest a series of public buildings in the vicinity of the road.⁵⁸ The quantity and unusual quality of sculptured stone indicate the considerable financial power of the district's inhabitants.

An impressive structure is also the semi-circular town wall of Dijon that was erected approximately 600 m to the west of the Via Agrippa (Fig. 9).⁵⁹ Unlike the previously mentioned settlements of Anse, Tournus and Chalon-sur-Saône, the fortification did not incorporate the trans-regional road, but stood slightly to the side on adjacent land, that seems to have been originally occupied by isolated farmsteads of a simple kind.⁶⁰ In consequence, late Imperial Dijon did not play any particular role in the movement of people or goods, since neither the *Tabula Peutingeriana* nor the *Itinerarium Antonini* saw any need to mention the place.

Nevertheless, in the 6th century Gregory of Tours enthusiastically describes an impressive fortification with 33 semi-circular towers, embedded in a fertile landscape with abundant vineyards.⁶¹ The walls, largely destroyed

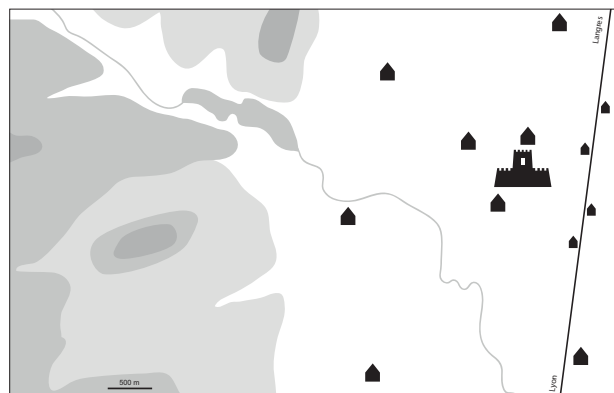


Fig. 9 Position of the late Roman town defence of Divio/Dijon in relation to the trans-regional road to Lyon and some early Imperial structures in the surrounding area (M. Jonasch).

⁵³ Cyrot 1874/75; Cyrot 1883; Quantin 1901; Kasprzyk 2005, vol. I, 229 and fig. 50.

⁵⁴ Regarding the so called *Tour d'enfer* see Affre 1894, esp. note 1.

⁵⁵ CAG 21/3, 5–44; Planson & Pommeret 1986; Pommeret 2001.

⁵⁶ Some other well developed sites of early Imperial date shared the same fate, like for example the prominent vicus of Vertault, see CAG 21/3, 248–380.

⁵⁷ For the history of the settlement in general see CAG 21/2, 229–304; Bedon 2001, 155–7; Frézouls 1988, 179–274; Durin 2011, 25–9.

⁵⁸ Périchon & Vernou 2006 with the relevant bibliography concerning the findings.

⁵⁹ Fyot 1920; Durin 2011, 31–6.

⁶⁰ See in this context a farmstead that was in use from the late Iron Age to the 3rd century AD, excavated in the Quartier Sainte-Anne in the area of the later castrum, CAG 21/2, 260–1.

⁶¹ Greg. Tur. Franc. 3.19. Gregory's motives for singling Dijon out are discussed by Loseby 2000, 85–6.

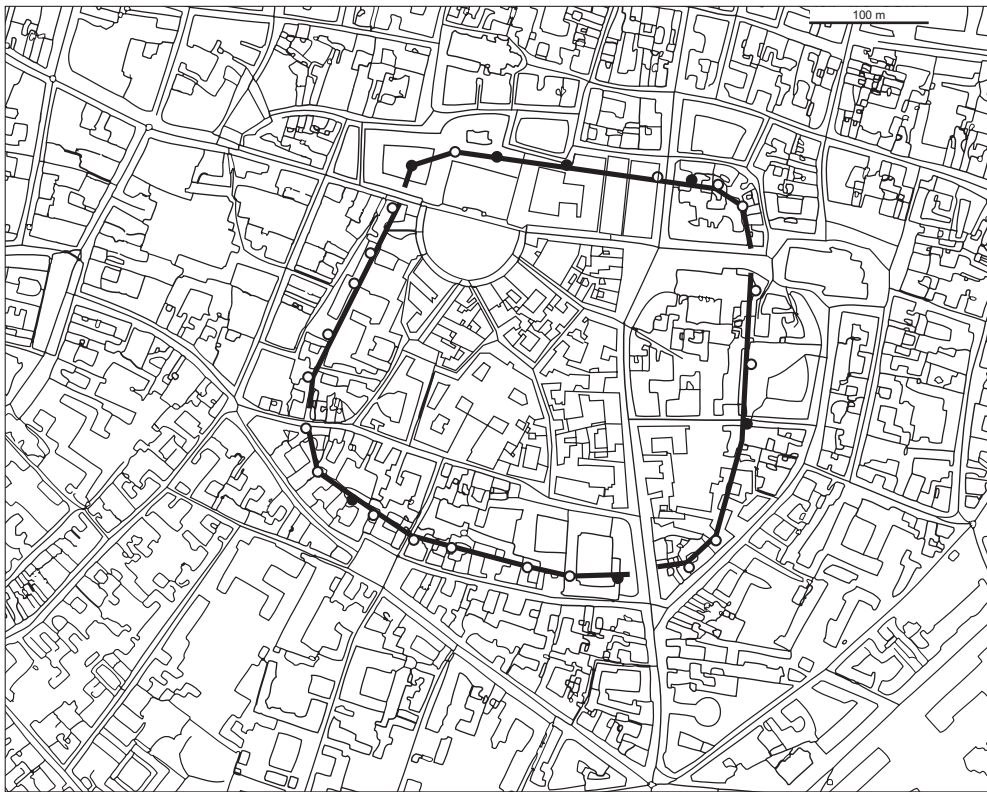


Fig. 10 Course of the late Roman wall-circuit against the modern townscape of Dijon (M. Jonasch).

over the last 200 years, consisted in the lower parts of large-scale limestone blocks, while the characteristic *petit appareil* masonry was only used from a height of five metres.⁶² There is no evidence of any other decorative measures in the outer facing. Four gates allowed access to the inner city, which covered over c. 10 hectares and already served in Gregory's time as an occasional residence for the bishop of Langres. The fertile countryside and the successful agricultural production outlined by Gregory of Tours seem to have been of great importance for this region from the early Imperial period to late Antiquity. The dating of the wall is suggested by Gregory of Tours, who quotes the inhabitants of the early medieval town testifying that it was Aurelian who built the defensive system in the third quarter of the 3rd century AD. Since there is neither archaeological nor historical evidence to support this statement, the early dating should not be regarded as assured. Aurelian might just have been associated with the building measure in later times, being not only the victor over Gaulish usurpers but also the driving force behind the fortification of Rome. A clear indication of the shifting of the settlement's centre is the

emergence of two necropolises to the west and north-east of the castrum probably in the course of the 4th century AD.⁶³ The extensive re-use of monuments from the road station in the foundations of the wall indicates a complete abandonment of the trans-regional road in view of possible cultic activities and as areas for self-presentation.

Planning and financing the walls

The examination of this series of settlements in the immediate surroundings of the trans-regional road from Lyon to Trier, demonstrates clearly that there are more facets to the issue of late Imperial fortification than suggested by the processes observed in most of the *civitas'* main cities.⁶⁴ Only two of the above mentioned places display the characteristic restriction of the populated area due to the newly built town wall. On the other hand, there are five settlements that seem to gain momentum only with the appearance of impressive wall

⁶² Gremaud 1954.

⁶³ The burials consist mostly of inhumations and are themselves difficult to date, see CAG 21/2, 298–303.

⁶⁴ Rebuffat 2012, 26–35.

circuits, enhancing some modest road station or creating a completely new centre in the middle of isolated farmsteads and second rate locations. Still, there are conspicuous differences in both origin and subsequent development, even among the fortification measures defining new or revitalized places.

In the case of the road stations Anse and Tournus, protection of trade goods and yields of the surrounding farmsteads was probably the main concern. Tournus as a *horreum* for the *annona militaris* might even have played a particular role in the collection of the new tax in kind, introduced as a general principle by Diocletian's reforms. The significance of protected storage facilities in the area is indeed proven by the destruction layers found in several farmsteads⁶⁵ and by later sources reporting the danger of roaming bands of marauders.⁶⁶ However, given their impressive design and considerable dimensions, the listed examples were certainly oversized just for discouraging stray brigands or scarce barbarian raiders.⁶⁷ A small-scale fortification like Beaune could even exceed walls from the civitas' urban centres in terms of width and height, though only protecting an area of extremely modest size. As mentioned above, the display character of town walls must also be considered an essential aspect⁶⁸ but still the question remains, for what purpose and at whose costs this new visibility was achieved; especially when there is no recognizable military or commercial benefit for the provincial or supra-regional government.

It is understood that the construction of a town wall was subject to permission under building law.⁶⁹ Yet there is no reason to believe in a centrally directed regulatory action, arranging the building of all major and minor fortifications throughout the Roman provinces.⁷⁰ In the case of the commercial centre at Chalon-sur-Saône, the small road stations of Anse and Tournus, and even the

arrow manufactory at Mâcon, one can agree on an official development whose main intention was the safeguarding of merchandise movement and military supplies. Those projects may well be related to the administrative and financial reforms initiated by Diocletian in the Tetrarchic period.⁷¹ For the outlying fortification of Beaune and even for the ambitious off-road establishment of Dijon, meanwhile, a decentralized initiative behind the building projects is conceivable. The remains of the early Imperial structures of Dijon indeed attest a population with a high economic power that satisfied its need for self-presentation at least from the 2nd century AD onwards through numerous grave monuments of astonishing quality placed alongside the trans-regional road.⁷² It is not unreasonable to imagine that they took all necessary steps to establish themselves in an imposing and visible central place, once circumstances required a change in the character of their living environment.

The circumstances that might have led to the relinquishing of early Imperial structures in favour of fortified centres must be considered against the background of a climate of latent threat created by a century of constant internal and external conflict.⁷³ Yet, the population in the surroundings did not feel an immediate need to move their main place of residence to the inside of the wall circuits, whatever their size and position. An impetus for the establishment of a central place may instead have been that isolated economic activities became harder to handle in the course of the 3rd century.⁷⁴ Throughout the Gaulish provinces a kind of hierarchization or centralization among dispersed settlements took place, and led to what would later become the early medieval village.⁷⁵ Moving together and acting in concert was unquestionably helpful when it came to the safeguarding of local political and economic interests. It is safe to assume that the confident repositioning of a mostly non-elite, but affluent population, into a central location

⁶⁵ van Ossel 1992, 71–2.

⁶⁶ The Codex Theodosianus (7.18.13–14) cites a law from AD 403 giving landowners the right to defend their property against brigands and deserters from military service, see Christie 2011, 100.

⁶⁷ It is a matter of fact that no assault from Frankish invaders caused any damage to the cited settlements in the area. Even the unprotected sanctuary of Les Bolards was never the target of barbarian attacks.

⁶⁸ Loseby 2006, 76–7; Dey 2010, 5.

⁶⁹ Dig.1.8.9.4 / Ulpian 68 ad ed.: *Muros autem municipales nec reficere licet sine principis vel praesidis auctoritate nec aliquid eis coniungere vel superponere*. Rebuffat 2012, 25.

⁷⁰ For different approaches to this issue see Christie 2011, 103; Witschel 1999, 329; Dey 2010, 4–5; Bachrach 2000, 194 n. 11.

⁷¹ It should be specified, though, that road stations on the way to the north were also fortified in much later times, like the settlement of Soulosse-sous-Saint-Elophe, which acquired its wall circuit sometime around the mid-4th century AD, see CAG 88, 345–55.

⁷² For the material in question see: CAG 21/2, 262–90.

⁷³ Hostein 2012, 275–276; Eck 2007, 27–8.

⁷⁴ For a discussion on the reasons for change in the system of agricultural exploitation see Ripoll & Arce 2000, 101–2.

⁷⁵ van Ossel 2010, 11; Witschel 1999, 320, 333; Kasprzyk 2005, vol. I, 241, 355; Ripoll & Arce 2000, 65–6, 113.

with an impressive wall circuit was the most prominent way to put this plan into action.⁷⁶

The new establishments of Beaune and Dijon are preceded by a decline in the number of small and middle size farmsteads, observed in several areas of modern Burgundy.⁷⁷ Of course this structural change affected not only the people that worked in agriculture, but also the craftsmen and merchants that were associated with the farmsteads and that we know well from their tombstones and inscriptions of the 2nd and 3rd century AD.⁷⁸ If the driving force behind the monumental centralization processes of Beaune and Dijon were indeed the local communities, the institution that helped them in implementing their projects can perhaps be identified with the micro-regional pagus, which already in early Imperial times looked after the community's public affairs.⁷⁹ In the area of Beaune, the Pagus arebrignus is known by name thanks to the previously cited speech for Constantine.⁸⁰ Two inscriptions from Dijon quote instead from a Pagus andomus for the area of ancient Divio.⁸¹ One could imagine that, through the agency of the pagus, not only the building permission could be obtained, but also funding for the ambitious projects.⁸²

From the Latin Panegyrics we know that the financial situation of the Civitas Aeduorum was precarious at the end of the 3rd and the beginning of the 4th century AD. There had already been help from Constantius I that allowed the civitas urban centre Augustodunum to be restored after the siege by Victorinus in 270. Following

the reform of the tax system, however, the situation seems to have become even worse.⁸³ In this context it is hardly conceivable that a rural community in the area of the troubled Pagus arebrignus could have handled an ambitious construction project like the Castrum belnense. Yet, the tax abatement granted by Constantine brought money into the civitas coffers that could have been used to revitalize the rural areas, since the capital city had already been restored a decade earlier. Some inscriptions of the 3rd century AD from Roman Africa prove indeed the Emperor's *indulgentia* as a prerequisite for the self-financing of civitas building measures.⁸⁴ As a matter of fact it seems to have been a relatively customary procedure to support building and restoration operations not by granting financial subsidies, but a tax abatement.⁸⁵ It is obvious that it was primarily the *curiales* who benefited from the tax relief. The explicit naming of the Pagus arebrignus in the speech of AD 311 indicates, however, that the area and its state of emergency was well known to the civitas notables and that there may even have been a special interest in restoring the region and its estates. The funding of the small but impressive fortification might have been a way to achieve this objective by supporting the local community, including producers and landowners.

For the civitas of the Lingones there is no evidence for the granting of the *indulgentia* at any time. Financial support through tax abatement might, however, have been at the root of the oral tradition that attributed the building of the city wall to the Roman Emperor Aurelian.

⁷⁶ The fortification of a secondary settlement surely did not indicate a political promotion, see Kasprzyk 2005, vol. I, 239. It could, however, be helpful for the further development, see Bachrach 2000. Also the fortified places mentioned here continued into the Middle Ages: Tournus became a significant monastery and Anse is known to have hosted several major councils before AD 1000.

⁷⁷ Hostein & Kasprzyk 2012 emphasize the sharp fall in the number of small-scale establishments in the region of Noyer, Chalon, Tournus and Ouroux. See also Kasprzyk 2005, vol. I, 308. For example the villa from Selongey, destroyed in the mid-3rd century (CAG 21/3, 185–191). For the Pagus arebrignus of Beaune the speech of thanks to Constantine describes the devastating consequences of the rural exodus, see Paneg. 5,6 and Hostein 2012, 258–259, 274 note 71.

⁷⁸ For example a collegium of *fabri ferrarii* from Dijon, CIL XIII 5474.

⁷⁹ Tarpin 2003, 262–266. The pagus is a geographic unit and administrative entity, subordinate to the civitas. The major task of the *magistri pagi* was to register the properties. In Dijon an inscription mentions the pagus as authority for the positioning of votive offerings, see CIL XIII 5474. The *magistri pagi* seem to have been mainly recruited from families close to the civitas elites.

⁸⁰ See note 51. Since also the area of Les Bolards was part of this pagus, the decision to build and finance a fortification near the road station of La Maladière might have been crucial also for the future of the sanctuary and its associated structures.

⁸¹ CIL XIII 5474. Interestingly enough the two communities, both consisting of non-specific dispersed settlements in early Imperial times, were the centres of their pagi from the Merovingian period until Carolingian times: the Pagus belnensis is mentioned in the 6th century as part of the diocese of Autun. In the same time the Pagus divionensis is known as a part of the diocese of Langres.

⁸² Rebuffat 2012, 33.

⁸³ Hostein 2012, 276–278; Kasprzyk forthcoming.

⁸⁴ Rebuffat 2012, 28–29, 47–49. The inscriptions originate from the province of Mauretania Caesariensis and refer inter alia to the construction and restoration of several city walls.

⁸⁵ Rebuffat 2012, 28.

Conclusion

The drastic delimiting of the urban area of the *civitas*' central sites and the emergence of new fortified communities in rural areas must both be considered part of a general paradigm shift in the conception of the human living space at the end of the 3rd century AD. The 'master plan' of the early Imperial period, which already came with a radical change to the Gaulish living environment, did not meet the demands of late Antiquity, either in urban or in rural contexts. Hence ancestral monuments could, unscrupulously and without a concrete threat, be used to support the impressive fortifications, both as strongholds and showpieces of a persevering and determined community.

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THE TWO DEFENSIVE SYSTEMS OF THE LATE ROMAN IMPERIAL PALACE OF *ROMULIANA*-GAMZIGRAD (DACIA RIPENSIS)*

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Abstract

Visitors to the Tetrarchic palace of *Romuliana* immediately notice that it is surrounded by two different sets of defensive walls and towers. The outer, later, wall surrounds its predecessor almost like a frame. Visually, it is dominated by closely spaced polygonal projecting towers. Associated finds allow for relatively reliable dating that places these fortifications firmly in the reign of the Emperor Galerius (AD 293–311). The massive walls and towers, however, do not appear primarily to have served a defensive purpose. The two gates with their rich architectural decoration that almost resemble triumphal arches in particular indicate monumentality, rather than defensive purpose.

The earlier fortifications, on the other hand, appear to be different in character. They have clear parallels at military sites in the region that date to the 3rd century. Gamzigrad is situated at the heart of an extensive mining region, on a strategic crossroads of the Via Egnatia, connecting northern Italy with the Bosphorus, and a branch road towards the Danube.

The differing characters of the two defensive systems of *Romuliana*-Gamzigrad suggest that they served different functions, which are explored in this paper.

For some decades in the late 3rd/early 4th century AD, the Roman provinces in the western Balkans, the area between the Adriatic, the Danube and the Balkan Mountains, became the historic-political centre of the Roman Empire. The officer Diocletian, proclaimed emperor in AD 284, originally came from Dalmatia. He established the tetrarchic system together with three

other military officers, all of whom came from his home region. As far as is known, he is the only Roman emperor who willingly retired, moving to his purpose-built retirement palace near *Spalato* (now Split, Croatia) upon completion of 20 years 'in office' in AD 305.¹ This complex of 215 m × 175 m can still be clearly identified in the cityscape of Split today. It is surrounded by a perimeter

* Translated by Christoph Rummel.

¹ Nikšić 2011.

wall that survives up to 18 m in places and can be accessed through representative gates on three sides.² The interior is divided into four equal parts by intersecting roads that are decorated with flanking porticoes. The central crossroads itself is marked by archways. The south-eastern quadrant contains a *triclinium* framed by a walkway on three sides, as well as an octagon that is also surrounded by three porticoes. In AD 316, Diocletian was buried in this structure. The dates of the emperor's abdication in AD 305 and of his death in AD 316 provide a chronological framework for the completion and use of the complex, although the beginning of its construction probably predates AD 305 slightly.

In AD 293, Diocletian appointed one of his officers, C. Galerius Valerius Maximianus,³ who had been born in the province of Moesia Superior, i.e. Dacia Ripensis around AD 250, Caesar and designated successor, also making him his son-in-law. On the abdication of the two Augusti Diocletian and Maximianus Herculus in AD 305, the acting Caesars Constantius I Chlorus and Galerius were elevated to the rank of Augusti and, in their turn, appointed Severus and Maximinus Daia as new Caesars. From the death of Constantius Chlorus in AD 306 until his own death in AD 311, Galerius was the *de facto* ruler in the entire Roman world. His *sedes imperii* is believed to have been set up in Serdica (Sofia) and to have been transferred to Thessaloniki in AD 308.⁴ The palace at that site, similar to the palace of Diocletian at Split, also featured an octagon.⁵ Yet, as stated by Pseudo Aurelius Victor (*Epit. de Caes.* XL, 15–17), he was not buried in Thessaloniki but at a site in the province of Dacia Ripensis that he named *Romuliana* in honour of his mother Romula.

In contrast to the palace of Diocletian at Split, the fortified complex of Galerius at Gamzigrad (Fig. 1) was not used after the 11th century AD. This means that the original structure is relatively well-preserved. In 1864, the Austrian Felix Phillip Kanitz (1829–1904), who

was travelling through Serbia, identified Roman walls standing to a height of 15 m on a plateau 'near the confluence of the two branches of the Timok river'. In the account of his travels he describes the complex as a 'massive castrum' and 'one of the most spectacular ancient structures in Upper Moesia'.⁶ The ruined fortifications he sketched surround an area of c. 4.5 ha. They form an irregular square with eastern and western side lengths of c. 195 m. Two gates in the east and west provide access through the 3.6 to 3.8 m thick walls. The southern side which lacks any means of access runs for a length of 234 m, while the 221 m long northern side has a 2 m wide postern gate and changes direction in an obtuse angle in its eastern part.

Systematic research and excavations at the site have been carried out regularly over the past 60 years.⁷ These have uncovered a significant part of the interior structures.⁸ The largest section of the site is covered by a building complex in the north-western part that is nearly 4,000 m². It was accessed from the south-east (Fig. 2.1) through an entranceway flanked by coloured stone columns. This led to an elongated vestibule decorated with polychrome mosaic floors, which in turn gave way to two further corridor-like covered walkways that were also decorated with mosaics. This opened into a central peristyle (Fig. 2.2). A large doorway with two steps led from here into a room of 204 m² with an apsidal north wall. This was decorated with *opus sectile* floors and a mosaic panel depicting a Dionysian scene (Fig. 2.3). East of this room is a further smaller peristyle that links to a complex of two joined buildings with three and four conches respectively (Fig. 2.4). This representative structure is generally identified as the actual palace. In the north-eastern part of the site, excavations to date have recovered a small podium temple (Fig. 2.6) as well as a further apsidal hall (Fig. 2.5). The latter, however, evidently does not respect the axis of the actual palace, instead following the orientation of the slightly turned

² The southern front, facing the sea, is not formed by a defensive wall and there is no gate. Instead, there is a façade of several storeys that includes an inconspicuous access way to the central peristyle.

³ Ancient sources differ in their description of the birthplace of Galerius: Pseudo Aurelius Victor (*Epit. de Caes.* XL, 15–17) places it in the province of Dacia Ripensis. However, this province is only attested from AD 283 onwards. Eutropius (*Breviarium ab urbe condita* IX, 22), on the other hand, states that Galerius was born in Dacia, not far from Serdica (modern Sofia, Bulgaria).

⁴ There is no archaeological evidence for a tetrarchic residence at Serdica, modern Sofia. See most recently Boyadjiev 2002. Construction of the arch of Galerius in Thessaloniki is generally seen in direct chronological relation to his victory over the Persians in AD 298 (Enßlin 1930, 2522; Klein 2005, 278). It is believed that construction of the palace in this city would have commenced soon after his appointment as Augustus in AD 305: Hadjityrphonos 2011, 207.

⁵ The interpretation of this octagon as a purpose-built mausoleum is generally rejected in recent research. See Hadjityrphonos 2011, 210–11.

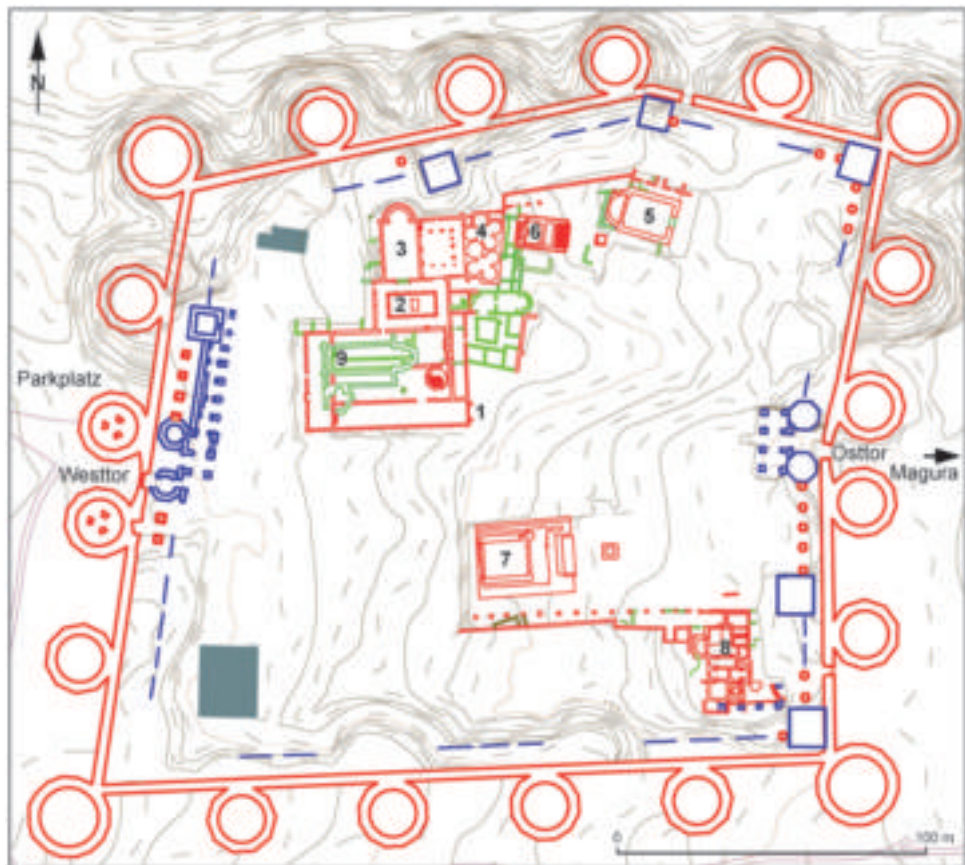
⁶ Kanitz 1892, 96–7.

⁷ Živić 2003, 8–9.

⁸ Živić 2003, 8–9; Vasić 2007a; Popović 2011.



Fig. 1 *Romuliana-Gamzigrad*, overview of the late Roman palace (Živić 2011, 101 fig.1).



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|--------------------------------|----------------------|-------------------|-----------------|
| — ältere Befestigung | 1 Eingang zum Palast | 4 Stibadium | 7 Großer Tempel |
| — Hauptausbauphase, Palastzeit | 2 Peristylhof | 5 Halle mit Apsis | 8 Thermen |
| — nachpalastzeitliche Bauten | 3 Audienzhalle | 6 Kleiner Tempel | 9 Kirchen |
| ■ moderne Bauten | | | |

Fig. 2 *Romuliana-Gamzigrad*, plan (Wulf-Rheidt, after von Bülow et al. 2009).

northern fortifications.⁹ The southern half of the site is dominated by the substructures of a large temple (Fig. 2.7) which is already clearly visible on Kanitz' sketch. A small bath-complex is situated in the south-eastern corner (Fig. 2.8), and a separate building with mosaic floors and a similar ground plan to the *triclinium* in the south-eastern corner of Diocletian's palace at Split (see above) was identified in the south-western corner.¹⁰ This, however, has since been covered up. East of this building, which has also been termed a *triclinium*, is a further structure that has only been partially investigated. On the basis of its interior division by rows of columns, however, it has been hypothetically identified as a *horreum*.

While a significant amount of data on the palace of Galerius near Gamzigrad has been gathered, and we understand much of its structure and development, many more questions still remain to be answered with regard to this complex. One such problem, which is currently not fully understood, is the fact that the palace is surrounded with two complete sets of defensive walls and towers, a phenomenon that was already noted and highlighted by Felix Kanitz. There is a space of c. 17 m between the two fortification systems, but only the outer and clearly younger fortifications have been preserved almost completely.¹¹ They include 20 polygonal projecting towers. The four corner towers are sixteen-sided on the outside and round on the inside. The outer diameter measures c. 26.3 m and the tower walls, just as the actual defensive walls, are 3.6 m thick. The intermediate towers, five on the northern side, four on the southern side and two each on the eastern and western faces, as well as the four flanking towers of the two gates, all have ten-sided outer faces and outer diameters of 22.55 m. At 1.8 m, the inner, earlier, fortification wall was only half as thick as the outer fortification. It also enclosed a significantly smaller area. In the north, both fortifications have a distinct obtuse turn towards the eastern corner tower. The earlier north wall was 198 m long, the southern face measured 213 m and the eastern and western sides extended to 180 m each. By the time of construction of the second fortifications at the latest, the earlier walls

had been removed to the level of their foundations.¹² The four corner towers of this fortification system, as well as eight intermediate towers, however, remain standing to a height of 5 m to this day, while others can be identified as overgrown rubble heaps.¹³ All the towers are square in plan, have side-lengths of 11.80 m and appear to have straddled the earlier fortification wall. The two gates, located at the central points of the eastern and western sides, were flanked by octagonal towers with outer diameters of 9 m. These had 1.6 m wide walls and were partially included in the later fortification system in so far as pillars connected with the later fortification wall were built against the outer faces of the earlier towers.

Until now it was generally assumed that the later fortification system was set up c. 12 years after the first, and that the two construction phases can be linked directly to the political career of the emperor Galerius:¹⁴ in AD 293, the emperor Diocletian appointed him Caesar in his tetrarchic system. Soon after this, Galerius is assumed to have begun to develop his birthplace into a luxurious residence, naming it after his mother Romula. The retirement of Diocletian and his co-regent Maximian Herculus in AD 305 made Galerius the most powerful man in the Roman Empire. It is believed to have been this that prompted him to have the newer fortification system erected around his palace. A direct comparison of the ground plans of the two defensive systems, however, shows that there are significant differences that cannot merely be explained by a chronological difference of 10–12 years (Figs 3a, 3b).¹⁵ Indeed, it appears that there were two very different concepts behind these fortification systems which, in turn, indicate very specific functions.

Any further discussion of this problem, however, requires as accurate a dating of the two walls as possible. The later wall can be dated to the reign of Galerius as Augustus, i.e. the years AD 305–11, on the basis of two archaeological indicators.¹⁶ One of these is a portrait head made from red porphyry that shows the typical characteristics of tetrarchic style.¹⁷ Its interpretation as an image of the emperor Galerius is further supported

⁹ As this area has not been completely studied, the structural complex to which the apsidal hall belonged, cannot be dated at present. Its chronological relationship to the smaller temple and the neighbouring excavated palace remains equally unclear.

¹⁰ Srejšević 1985, 53–4 figs 3–7.

¹¹ Čanak-Medić & Stojković-Pavelka 2011; Vasić 1995.

¹² Vasić 1995, 318.

¹³ This is particularly true of the towers on the southern side as well as the two western corner towers. It is also marked on the plan (Fig. 2).

¹⁴ Vasić 2007a, 36–9.

¹⁵ von Bülow 2012.

¹⁶ Vasić 2007a, 49–51.

¹⁷ Srejšević 1992/93; Živić 2011, 109–11 fig. 13.

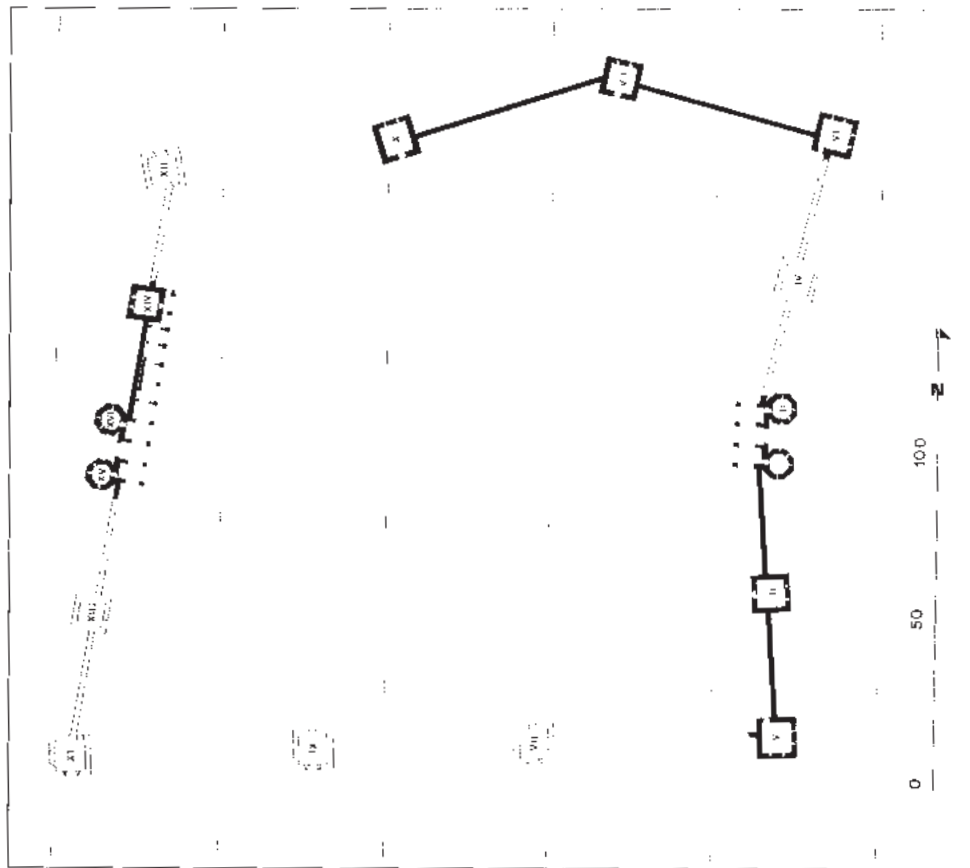


Fig. 3a *Romuliana-Gamzigrad*, plan of the earlier fortifications (after Čanak-Medić & Stojković-Pavelka 2011).

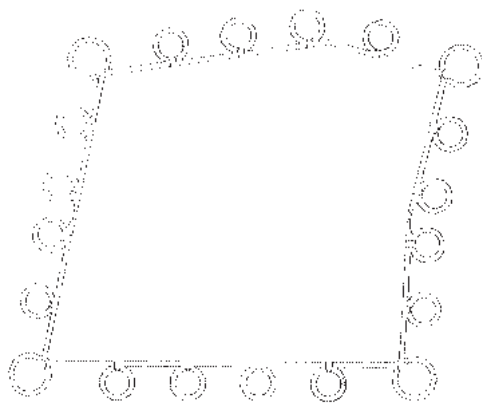


Fig. 3b *Romuliana-Gamzigrad*, schematic plan of the later fortifications (after Janković 1983).

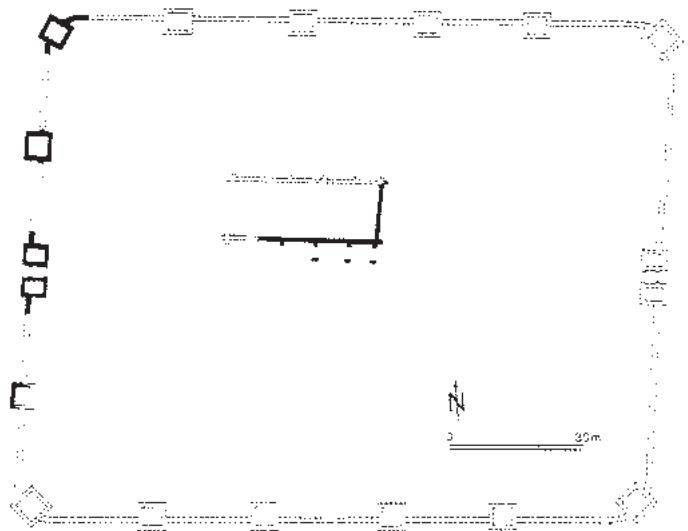


Fig. 3c *Timacum minus*, plan of the second stone phase of the fort (after Petrović 1986).

by the find of an archivolt depicting a laurel wreath flanked by two peacocks and bearing the inscription FELIX ROMVLIANA.¹⁸ Any dating attempts are further supported by a pilaster with relief decoration that was found in the rubble fill of the eastern gate.¹⁹ This depicts a standard with four tondi. Three of these show pairs of male figures, the upper two of which are similarly dressed in *paludamenta* – the typical military cloak also worn by the emperors. The two male figures in the bottom tondo are dressed in what appear to be *togae*. The images are generally interpreted as depicting the emperors of the second tetrarchy in the upper tondi, and showing the two *seniores augusti*, the emperors Diocletian and Maximianus Herculius, who retired in AD 305. As the latter, however, was re-proclaimed emperor in AD 307, this particular constellation of individuals at the top of power in the Roman Empire would only have existed during the first two years of Galerius' reign as Augustus.

While it appears that the eastern Main Gate must have been completed by AD 307 at the latest, therefore, work on the western fortifications seems not to have been completed when the emperor died in AD 311.²⁰ Furthermore, most interior structures appear to be associated with the second set of fortifications. To date, no interior buildings can be linked to the earlier walls with certainty, although no structures excavated to date extend beyond the area defined by the earlier fortification system.²¹ This means that only a reliable dating of the earlier wall can answer the question whether Galerius himself did in fact give the orders of construction for *both* sets of fortifications. This, however, is complicated, as there are no datable finds that can be linked to the level of the earlier wall stratigraphically.

Excavations at *Romuliana*-Gamzigrad did, however, identify large numbers of tiles stamped by *legio V Macedonica*, some built into parts of the earlier fortification wall (Fig. 4).²² Further stamped tiles were

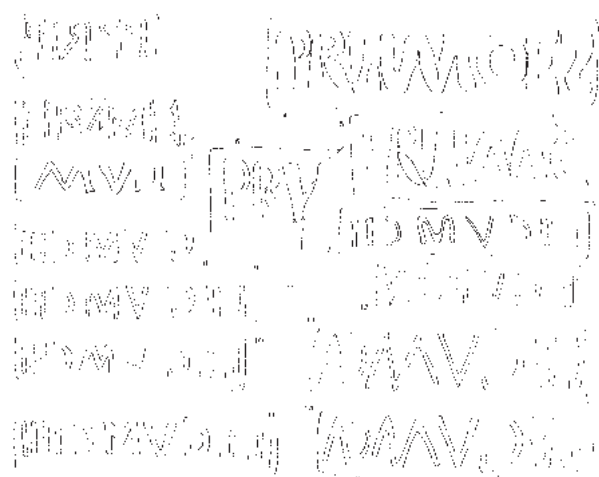


Fig. 4 *Romuliana*-Gamzigrad, selection of tiles stamped by *legio V Macedonica* (after Lalović 1983).

found in the rubble fill between the two fortification circuits. This may suggest that soldiers of this legion were involved in the construction of the earlier wall and could lead to the tentative suggestion of a *terminus post quem* of construction in AD 270, the year that this legion returned to its original base at *Oescus* (Gigen near Pleven, Bulgaria) in *Dacia Ripensis*, the province in which *Romuliana* lay.²³ In order to accommodate the returned soldiers, a walled annexe was added to the settled area of the *colonia Ulpia Oescus*. This relatively well-dated wall includes tile stamps in the same shape as some of those found at *Romuliana*. This has been taken to imply that the earlier fortification wall was built in AD 293, when Galerius was pronounced Caesar.²⁴ It is equally possible, however, that these tiles were built into the walls as early as the 270s or 280s, i.e. 20 years before Galerius even came to power. Such an interpretation may be supported by numerous coins of the emperors Aurelian (270–5) and Probus (276–82) that have been found in the immediate

¹⁸ Srejović 1985; Živić 2011, 102–3 fig. 5.

¹⁹ Srejović 1991.

²⁰ Vasić 2007a, 52. Excavation of the fill of the southern tower of the outer western gate (Tower 19) showed that it apparently was never roofed.

²¹ Vasić 1995, 317–19. The hypothesis that the apsidal hall in the north-eastern part of the side should be seen as contemporary with the earlier northern fortification wall because of its orientation, as stated on p. 000, remains yet to be proven by detailed stratigraphic relationships.

²² Čanak-Medić 1978, 89–90; Lalović 1983, 163, 165, cat. nos 336–9; Mirković 1997, 429–30; Christodoulou 2002.

²³ The fifth Macedonian legion was stationed at *Oescus* as early as the 1st century AD (Kabakchieva 2000, 19–20, 115–17, 119–20). It took part in Trajan's Dacian Wars, after which it was based in Troesmis, Iglica, Tulcea county, in Romania until AD 168. From here it moved to Potaissa, Turba, in Romania until returning to *Oescus* under the emperor Aurelian (270–5); Ivanov & Ivanov 1998, 10–27; Ivanov 1993, 23–6; Ivanov 2002, 12–15.

²⁴ Vasić 1997, 152–4.

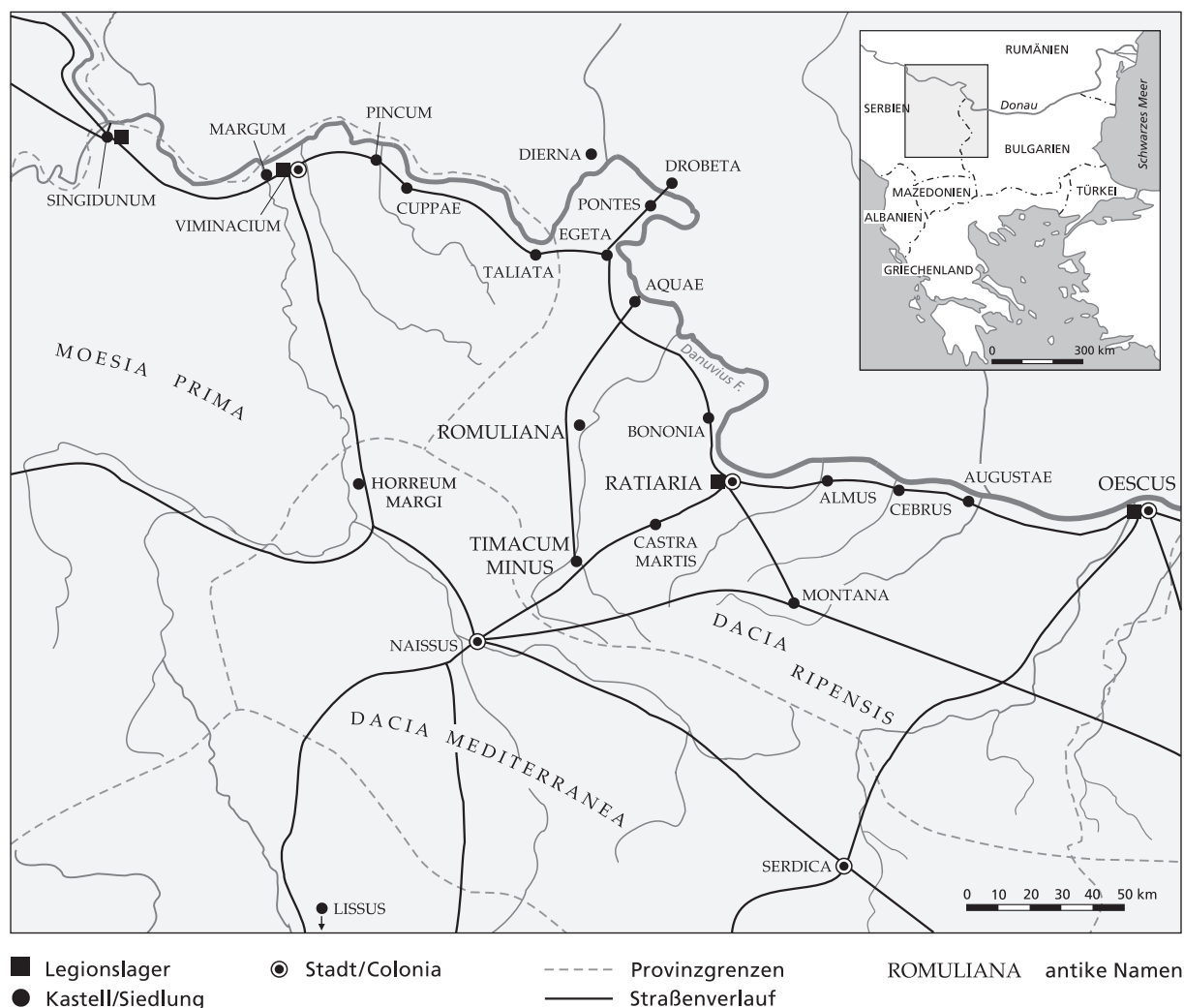


Fig. 5 Roman roads in the province of Dacia ripensis (v. Bülow 2011, 160 fig. 6).

vicinity of the palace as well as the palace itself.²⁵ None of these coins, however, were found in a direct relationship with the fortifications themselves. The reconstructed plan of the earlier fortifications at *Romuliana-Gamzigrad* is very similar to that of the second stone phase of the Roman fort of *Timacum Minus* (Ravna, Serbia) (Fig. 3c).²⁶ This site is also located in the Timok valley and lies c. 40 km south of *Romuliana-Gamzigrad*. Spolia built into the fortifications of this phase at *Timacum Minus* date it to the third quarter of the 3rd century AD. These similarities with the fortifications of *Timacum Minus* therefore provide a further indicator that the earlier fortification

system of the palatial complex at *Gamzigrad* may, in fact, date to the pre-Galerian period.

Both sites, *Timacum Minus* and *Romuliana-Gamzigrad*, were situated at crossroads within a road-network that provided access to the mining regions of what is now eastern Serbia. This area was of high importance for the Roman state economy, particularly so following the loss of the gold and other mines north of the Danube with the abandonment of the Dacian provinces in the early 270s AD (Fig. 5). As with *Timacum Minus*, the earlier fortifications of *Romuliana-Gamzigrad* appear to be those of a military

²⁵ Vasić 2007b. On Aurelian's efforts to consolidate imperial and military influence in the Balkan Provinces, see Velkov 1998; Hartmann 2008, 309–23.

²⁶ Petrović 1986.

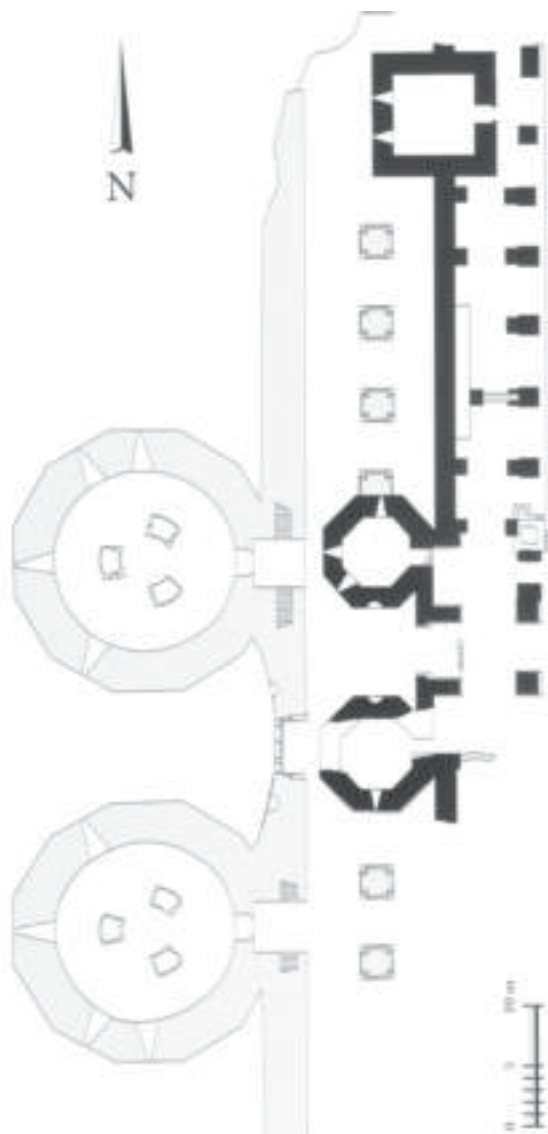


Fig. 6a *Romuliana-Gamzigrad*, plan of the west gate: black – earlier phase; hashed – second phase (after Čanak-Medić & Stojković-Pavelka 2011).

base, probably established to safeguard transport routes. The larger fortified area of Gamzigrad (180 m × 200 m) as opposed to *Timacum Minus* (144 m × 120 m), however, may underline this site's importance and possible function

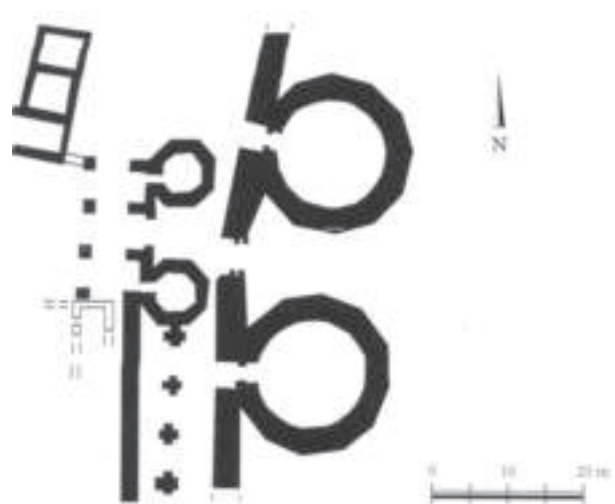


Fig. 6b *Romuliana-Gamzigrad*, schematic plan of the east gate: right – second phase; left – earlier phase; missing walls – remains of an earlier building (after Petković 2011).

as a central place.²⁷ As such it appears possible that a military base at *Romuliana-Gamzigrad* did not merely accommodate soldiers to control an important transport route, but that it was a centre for the administration and distribution of ore mining. It is this key role of the site within his native province of Dacia Ripensis that may have been the reason for the emperor Galerius to place his retirement palace here and name it after his mother, *Romuliana*. Yet the fortifications, possibly damaged through a natural catastrophe at some point in time,²⁸ apparently did not suit the imperial need for representation. As such, Galerius ordered a new wall to be built around the existing earlier fortifications. This was fortified with 20 massive polygonal projecting towers, giving the entire complex the character of a widely recognizable symbol of power and might. Any military aspects of value as a fortification became secondary at best. This is particularly apparent in the design of the two gates (Fig. 6a, 6b). The western gate of the later fortification was positioned in a way that meant that one remaining tower of the earlier gate effectively blocked the thoroughfare, creating a kind of outer bailey or

²⁷ The outstanding position of Gamzigrad was already identified by Felix Kanitz in his travels through Serbia in the mid-19th century. He writes: 'Ein Blick auf die Karte zeigt, dass die Römer zur Unterstützung ihrer, an so vielen Punkten des geschilderten Minengebietes am Timok zerstreuten Niederlassungen und kleinen Castellen, eines grösseren, diesen wenn nothwendig ausgiebige militärische Hilfe bringenden festen Waffenplatzes bedurften' (Kanitz 1892, 96). It is likely that the site could have served as an administrative centre for the local mining region, possible even as seat of a procurator, as was suggested by Djodje Mano-Zisi in the 1950s. See Mano-Zisi 1956, 67

²⁸ So far, the archaeological record has provided no indicator of purposeful destruction. There are, however, numerous instances of washed-out or collapsed walls. Such data has frequently been interpreted as indicative of an earthquake. See Kandler *et al.* 2007; Sommer 2007.



Fig. 7 *Romuliana-Gamzigrad*, magnetometry plot of barracks-like structures *extra muros* (Schüler & Opelt, after von Bülow *et al.* 2009).

propugnaculum and significantly limiting access to the palace from the rear. At the east gate, on the other hand, the two gates are only shifted slightly in relation to one another. This led those entering onto a thoroughfare that ran at an angle to the main axis of the complex as a whole, but directed them straight to the entrance of the palace itself. The rich decoration of the east gate, part of which are the relief pilasters that link it directly to Galerius, makes it seem more like a triumphal gate than an entrance to a military installation.

The above interpretation is supported by a brief overview of the internal layout of the palatial complex: there are no functional buildings of a military nature such as barracks inside the palace. Geomagnetic surveys outside the walled enclosure, however, showed structures that clearly look military in plan, but have not yet been excavated.²⁹ The structures identified as *tabernae* as well as a *horreum* surrounded by a perimeter wall³⁰ both appear to indicate the presence of the military. The same is true of a series of rooms along the eastern wall of the walled settlement area north of the imperial residence (Fig. 7) – even if the wall of this area was not fortified with towers.³¹

In summary, the two fortification systems of *Romuliana-Gamzigrad* can be seen as reflecting the change in the nature of the site: the earlier fortifications reflect the site's military purpose safeguarding a road network of over-regional importance and are clearly military in layout and design, the second and later system with its dominant projecting polygonal towers presents a representative aspect. This is particularly highlighted by the East Gate with its elaborate architectural decoration

that can be linked directly to the emperor Galerius and his rule; in this respect, the gate appears more like a triumphal arch, rather than the entrance to a military complex.³² This representative character is confirmed by a quick survey of the interior buildings of the palatial complex, which, apparently do not include barracks or similar structures of military function.

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²⁹ von Bülow & Schüler 2007, 231–4.

³⁰ von Bülow *et al.* 2009, 112 fig. 5, 23 (Schüler & Opelt).

³¹ von Bülow *et al.* 2009, 114 fig. 6, 16, 17 (Schüler & Opelt); von Bülow (in press).

³² This fortification system also appears to have served some form of military purpose. This is indicated not only by the unique way of securing the western gate, but also by the existence of a defensive ditch at least in front of the southern wall, where it has been identified on the basis of geomagnetic survey results and investigated through trial trenches. See von Bülow *et al.* 2009, 112 fig. 5,2,7 (Schüler & Opelt); 119–22 (von Bülow).

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Historical Context

ANTIKE BEFESTIGUNGSBAUTEN IM HISTORISCHEN KONTEXT. EIN DISKUSSIONSBEITRAG DES NETZWERKS ‚FOKUS FORTIFIKATION‘

Eric Laufer

Zusammenfassung

Die hier unter dem Stichwort ‚historischer Kontext von antiken Befestigungsbauten‘ vorgestellte Auffassung geht auf eine entsprechende Themen- und Methodendiskussion des Netzwerks ‚Fokus Fortifikation‘ zurück. Die Suche nach der geschichtlichen Einordnung dieser Monumente bestimmt seit jeher die Forschung; traditionell meist konzentriert auf die Erbauungszeit und den Bauherren sowie unmittelbare ereignisgeschichtliche Zusammenhänge (etwa militärische Krisen- bzw. politische Umbruchsmomente). Berücksichtigt man die methodischen Möglichkeiten in ihrer gesamten Bandbreite sowie neue, differenzierte Fragestellungen der archäologischen und historischen Forschung wie auch der Bauforschung, bietet sich eine viel weiter gespannte Auffassung von ‚historischem Kontext‘ an: eine ganzheitliche Perspektive, die politische, kulturelle, soziale und ökonomische Faktoren in die Diskussion einbezieht. Das Monument hat urbanistisch-topographische wie siedlungsgeschichtliche Bedeutung; es spiegelt ökonomische Möglichkeiten, Ziele bzw. Ansprüche eines Bauherren; es hat funktionale Aspekte und mitunter darüber hinausgehend Symbolkraft; es wird im Kriegsfall und, ganz andersartig, in einem zivilen Alltag genutzt: Der Wehrbau ist somit Teil einer komplexen Lebenswelt einer Gesellschaft.

Voraussetzung, die gesamte Indizienkraft des Monumentes für dessen Interpretation nutzbar machen zu können, ist eine möglichst genaue Untersuchung des Monumentes selbst – ganzheitlich in seiner Anlage, in den Charakteristika seiner Einzelbauten und seiner Bauweise, seinen baulichen Veränderungen im Lauf der Zeit. Die antiken literarischen Quellen, die epigraphischen Zeugnisse und mitunter auch bildliche Darstellungen bieten ein unterschiedliches, insgesamt aber begrenztes Spektrum an Indizien zum ‚Kontext‘-Verständnis der Bauten; sie sind freilich nur methodisch sorgsam – d. h. quellenkritisch – heranzuziehen.

Die antiken Befestigungsbauwerke stellen eine in vielfacher Hinsicht heterogene Monumentgruppe dar: nach Größenordnung, baulicher Gestalt, funktionalen Aspekten, nach einer permanenten oder auch ephemeren Zweckbestimmung, in ihrer kontextuellen Bindung an eine bloß militärische oder auch zivile Personengruppe usw. Eine Bewertung des einzelnen Monumentes umfasst daher notwendig vielfache Faktoren und kann interpretatorisch sehr unterschiedliche Akzente setzen, wie auch die thematische Breite der in diesem Band versammelten Beiträge verdeutlicht.

Die folgenden Vorträge (*Michael Kerschner; Peter A. J. Attema & Tymon C. A. de Haas; Christian Winkle; Pierre Ducrey; Caterina Parigi; Isabelle Pimouquet-Pédarros & Nevzat Çevik; Catharine Hof*) standen bei der Athener Konferenz unter dem Leitmotiv ‚Historischer Kontext‘. Diese Formulierung sei zunächst in Kürze begründet. „Befestigungen im historischen Kontext“ waren Gegenstand einer Tagung des Netzwerks „Fokus Fortifikation“ in Frankfurt a. M. (2010). Die dort thematisierten Aspekte sind in der Folge in einem kollektiven Diskussionsprozess zur inhaltlichen Abgrenzung des Themas sowie zu methodischen Gesichtspunkten erweitert worden; die folgenden Ausführungen rekurren darauf.¹

Studien zu antiken Befestigungsbauten, seitdem diese im 19. Jahrhundert zum Gegenstand wissenschaftlichen Interesses wurden, zielen stets darauf ab, die Monumente in möglichst konkrete historische Zusammenhänge einzuordnen. Die übliche Herangehensweise ist die Analyse der architektonischen Merkmale – etwa zu Bautechnik und fortifikatorischem Entwicklungsstand – im Vergleich mit anderen Bauwerken des Typs. Die gewonnenen Indizien werden vor dem Hintergrundwissen zu dem jeweiligen Kulturkreis und dem Zeithorizont der Baumaßnahme bewertet. Häufig bieten dabei die antiken Schriftquellen nähere Anhaltspunkte zum betreffenden Ort oder zumindest seinem größeren regionalen Kontext, wenn auch seltener ausführlichere Informationen zum Wehrbau selbst. Die Kombination der verschiedenen Indizien begründet einen Datierungsansatz, für den eine plausible Konstellation von (politischen, gesellschaftlichen, militärischen) Zeitumständen benannt wird. Das ist, vereinfacht gesagt, der traditionelle Forschungszugang zu dieser Art Monument. Die Interpretation des Bauwerks blieb in älteren Studien nicht selten weitgehend auf eine

solche Zuordnung zur politischen Ereignisgeschichte bzw. auf die Perspektive des Bauherrn (sei es eine Herrschergestalt oder eine andere politische Einheit) beschränkt.

Die häufig implizit verfolgte Prämisse, Errichtung und Bauphasen einer Befestigung seien (immer) konkret mit überlieferten historischen Ereignissen in unmittelbaren kausalen Zusammenhang zu bringen, wird heute sicher zu Recht differenzierter gesehen; damit einhergehend ebenso der Umgang mit historischen Sekundärzeugnissen wie den Schriftquellen. Neben solchen Veränderungen der methodischen Grundlagen hat die neuere Forschung auch ein zunehmend breiteres Spektrum an Fragestellungen und methodischen Herangehensweisen weiterentwickelt bzw. ausdifferenziert: etwa die der historischen Bauforschung, der Siedlungsarchäologie, der Survey-Archäologie, bis hin zu experimenteller Archäologie (speziell zu antiken Handwerks- und Bautechniken). Ebenso verfolgt die althistorische Forschung neue Interpretationsansätze, die sich verstärkt etwa sozialen und wirtschaftlichen Aspekten des antiken Militärwesens widmen. Die Aktualität des Themas Kriegführung und Militär allgemein in den antiken Gesellschaften wird etwa in einer Reihe neuerer Kompendia deutlich;² die Befestigungsbauwerke bedeuten in diesem breiteren Rahmen freilich nur einen Teilaspekt.

Jedes Merkmal eines Befestigungsbaus resultiert aus geschichtlichen Handlungsmustern von Personen(-gruppen). Die Errichtung des Bauwerks erfolgt zu einem spezifischen Zeitpunkt, unter verschiedenen spezifischen Umständen: einer politischen Lage, den konkreten Intentionen eines Bauherrn, der die Planung verantwortet; einer Ausführung durch Baumeister und Baupersonal, meist auch unter verschiedener Art der Mitwirkung einer betroffenen Zivilbevölkerung. Planung und Ausführung stehen zudem unter dem Vorzeichen finanzieller Möglichkeiten sowie technischer und logistischer Fähigkeiten. – Gewissermaßen indirekt stellt häufig auch ein bestimmter militärischer Gegner, zu dessen Abwehr das Monument konzipiert ist, eine Bedeutungsgröße der Bauplanung dar. – Die Hoheit in konzeptionellen und bautechnischen Angelegenheiten wird im Einzelfall je nach den Gegebenheiten zwischen den Entscheidungsträgern (Bauherr, militärische Berater, Baumeister, Bauhütten/Baupersonal) variiert haben. Kurz gesagt, die Errichtung eines Wehrbaus ist Ergebnis

¹ Der Beitrag hier basiert im Wesentlichen auf den Ausführungen in Laufer 2016 und in Frederiksen u. a. 2016.

² Genannt seien Erdkamp 2007; Meißner 2007; Sabin 2007; Sabin u. a. 2007; Davies 2008; de Souza 2008; Couvenhes u. a. 2011 (jeweils mit weiteren bibliographischen Hinweisen).

eines komplexen Szenarios sozialer, wirtschaftlicher, politischer, kultureller Faktoren. Das gilt gleichermaßen für alle weiteren Bauphasen des Monumentes, die von einer jeweils eigenen, veränderten Konstellation von Faktoren geprägt sind.

Die Summe aller damit eröffneten interpretatorischen Aspekte könnte – in einer umfassendsten Auslegung des Begriffes – ebenfalls als ‚historischer Kontext‘ der Befestigungsbauwerke verstanden werden. Die nähere Interpretation eines Bauprozesses, oder die Untersuchung von Zusammenhängen zwischen mehreren Befestigungen einer Region, ist letztlich nichts anderes als eine bestimmte Sichtweise, eine ausschnittshafte Betrachtung dieses historischen Gesamtkontextes. Die Diskussionen innerhalb des Netzwerks „Fokus Fortifikation“ galten indes einer adäquaten Differenzierung nach solchen größeren Themenbereichen (die sich auch in den Sektionen der Athener Konferenz spiegeln). Diejenige zum ‚historischen Kontext‘ ist daher auf zwei Teilaspekte fokussiert worden:

- 1) den Stellenwert *des Bauwerkes selbst* als Quelle für solche verschiedenen Zusammenhänge zu verdeutlichen: ‚historische‘ im engeren Sinn, d. h. das Monument in Bezug zur Ereignisgeschichte, sowie darüber hinausgehende übergreifende kulturelle Aspekte;
- 2) die Bedeutung historischer Quellen zu den Monumenten in einem Überblick zu würdigen.

Beide Gesichtspunkte werden im Folgenden knapp umrissen.

- 1) Für die gesamte Bandbreite an Fragestellungen zum Kontext der antiken Wehrbauten bedeuten die Monumente selbst eine Quelle ersten Ranges, zumal die vorrangige im Vergleich mit externen historischen Zeugnissen. Für eine Reihe von interpretatorischen Fragen ermöglichen überhaupt nur die Baubefunde selbst näheren Aufschluss.

Voraussetzung dafür ist die möglichst umfassende Dokumentation und Analyse des (sichtbaren) Baubestandes, basierend auf den methodischen Prinzipien der historischen Bauforschung. – Die ergänzende Methode archäologischer Ausgrabung wird für Befestigungsbauten erst in jüngerer Zeit verstärkt genutzt.

Eine systematische Bewertung des Monumentes hat verschiedene Betrachtungsebenen zu berücksichtigen: beginnend mit der Wehranlage als Gesamtgröße, über einzelne topographische und bauliche Komponenten

(Türme, Tore, Kurtinen etc.) bis hin zur Bautechnik, zu einzelnen Ausstattungs- oder Dekorelementen; letztlich auch Funde und Kontextindizien der näheren räumlichen Umgebung, soweit sie mit der Befestigung in Zusammenhang stehen. Das Bauwerk insgesamt ist zum einen hinsichtlich der Topographie, deren Vorzügen und Nachteilen für den Kriegsfall wie den zivilen Alltag, zu betrachten. Die Befestigung ist speziell auch ein zentraler Indikator für die gesamte Siedlungsentwicklung: Der Umfang der Mauerlinie und die Größe des bebauten Siedlungsareals stehen meist in einer dynamischen Wechselwirkung zueinander; je nach Zeitumständen kann das eine das andere bestimmen und sogar baulich verdrängen. Eingedenk dessen sollte eine Befestigung nicht losgelöst vom Siedlungsstand generell, insbesondere das Verhältnis zu Wohnbebauung, Verkehrsführung, aber auch Kriterien wie der Wasserversorgung etc. betreffend, bewertet werden. Umfang und Gestalt der Befestigung spiegeln damit weiterhin in gewissem Sinn Größe und Macht, ökonomische Leistungsfähigkeit, ein ‚cultural habit‘ des Bauherrn bzw. der ansässigen Bevölkerung. Zum anderen hat die Befestigung über die militärische Bedeutung hinaus oft mehrere weitere Bedeutungsebenen; für den Siedlungsalltag (besonders das Verkehrswesen), religiöse Aspekte (etwa auch als Grenze der Bestattungszone), unter Umständen auch als Kennzeichen eines bestimmten politischen Hoheitsstatus usw.

Vergleichbar ist nach einer möglichen spezifischen Bedeutung einzelner Bauabschnitte oder Baukörper zu fragen: insbesondere etwa für die Tore, die in Größe, Gestalt und Ausstattung die Bedeutung von Verkehrswegen (beispielsweise zu bestimmten Nachbarorten) erkennen lassen können.

Bautechnische Untersuchungen dagegen sind vor allem hinsichtlich von Erkenntnissen zum Bauprozess bedeutsam, wie die möglichen Gründe für die Wahl einer bestimmten Bautechnik oder eines bestimmten Baumaterials. Sorgfältige Detailbeobachtungen eröffnen mitunter sogar näheren Einblick in die Bauorganisation, mithin soziale und wirtschaftliche Aspekte. Entscheidend sind sie weiterhin für die Genese des Monumentes: die baulichen Veränderungen im Laufe der Zeit, die notwendig jeweils Ausgangspunkt neuer Fragen sind.

Das Bauwerk in seiner Gesamtheit, Details der Bautechnik oder der Ausstattung mit Baudekor lassen darüber hinaus auf Intentionen des Bauherrn schließen, etwaige ‚Botschaften‘, die an die ansässige Bevölkerung oder Fremde bzw. potentielle Feinde gerichtet sind.

Als Erweiterung zu diesem zentralen Fragenkreis sei noch an die Bedeutung der Befestigungsbauten als Teil der komplexen Lebenswelt einer sozialen Gruppe – Soldaten und/oder Zivilbevölkerung – erinnert. Diesbezüglich ist an eine Reihe von Befunden und Fundobjekten zu denken, die teils losgelöst vom eigentlichen Bauwerkskontext stehen, aber Zeugnisse einer unmittelbar mit ihm verbundenen Alltagskultur darstellen: von infrastrukturellen Baulichkeiten wie Truppenunterkünften, Zisternen, Latrinen, Pferdeställen, die der Befestigung räumlich und funktional zugeordnet sind, bis hin zu verschiedensten archäologischen Fundgattungen – Soldatengrabsteinen, Graffiti, Waffen- und Ausrüstungsteilen, Münzen und Keramik, wie sie am ehesten im Fall von Ausgrabungen als Quellengattung verfügbar werden. Eine erweiterte Betrachtungsperspektive von ‚Kontext‘ endet nicht an der Türschwelle eines Turmes oder dem Ziegel seiner Dachdeckung, sondern kann weit auf den Forschungsbereich von materieller Kultur und Gesellschaft insgesamt übergreifen.

Die Bandbreite interpretatorischer Gesichtspunkte ist damit lediglich angedeutet. Die chronologische Komponente ist dabei noch gesondert zu betonen. Jede Fragestellung ist analog der Bewertung der ersten Bauphase für jede spätere Nutzungsphase des Monumentes zu prüfen. Die sekundären Veränderungen des ursprünglichen Bauzustandes können sehr verschiedener Natur, zudem kurzfristig oder langlebig, sein: routinemäßige Instandhaltung; bauliche Erneuerung mit fortifikatorischer Verstärkung bzw. Modernisierung, gegebenenfalls unter Erweiterung oder Reduktion des älteren Mauerverlaufs; verschiedene Zerstörungsszenarien, von Vernachlässigung und Verfall bis hin zu gründlicher Schleifung. Jeder dieser Bauzustände ist aufschlussreich als Ergebnis jeweils eigener spezifischer Epochenumstände und entsprechend ‚gleichberechtigter‘ Behandlung wert.

In der Einzelfall-Studie wird es freilich kaum je möglich sein, allen denkbaren Aspekten gerecht zu werden. Auch heute sind Mauer-Forschungsprojekte meist Aufgabe eines Einzelnen, und dessen Herangehensweise ist geprägt von seiner disziplinären Prägung – Archäologe, Bauforscher, Spezialist für Militärgeschichte usw. –, von persönlichen Interessenschwerpunkten und auch seinem Kenntnisstand an Vergleichsbauten. Diese und andere Faktoren (etwa projektbezogene Rahmenbedingungen)

führen in der Regel zu einer Konzentration auf *eine* Fragestellung oder *eine* Bauphase. Dieser faktische Umstand der Forschung ist nicht per se mahrend zu werten, insofern als es in Einzelstudien befund- bzw. quellenbedingt ohnehin niemals lohnt, alle Fragen aufzugreifen. Die Workshops im Rahmen des Netzwerkes haben indes eindringlich die Notwendigkeit verdeutlicht, die Bandbreite methodischer Möglichkeiten und inhaltlicher Fragestellungen in kollektiver Diskussion zusammenzuführen und damit für die allgemeine Forschungsdiskussion zu erschließen. Die dabei formulierten Gedanken mögen diesbezüglich hilfreich sein, den Einzelnen bei künftigen Studien zu antiken Befestigungsbauten für das Themenspektrum möglicher ‚Kontext‘-Fragestellungen zu sensibilisieren und zugleich die methodischen Grundlagen zu vergegenwärtigen.

2) Der zweite genannte thematische Schwerpunkt betrifft die sekundären historischen Quellen, die Aufschluss zum Verständnis der Monumente bieten. In erster Linie ist hier an die antiken *literarischen* Quellen gedacht. Diese dienten in der Vergangenheit oftmals als Ausgangspunkt, mitunter sogar als entscheidende Autorität bei der Interpretation der Baubefunde. Der Leitstern etwa für Schliemanns Grabungen in Troja waren die topographischen Angaben der Ilias in einem Maße, dass eines der von ihm ergrabenen Stadttore der bronzezeitlichen Befestigung das homerische „Skaiische Tor“ – Schauplatz der berühmten Teichoskopie (Il. 3.146–244) – sein *mußte*.³ Diese stark von den Quellenzeugnissen geprägte Befunddeutung wirkt in manchen Forschungstraditionen noch heute einflussreich nach – man denke an den Tenor vieler Artikel zu den stadtrömischen Bauten im *Lexicon topographicum urbis Romae*.⁴

Bezüglich der Schriftquellen ist freilich ein sorgsamer Umgang entsprechend den grundlegenden Methoden der Quellenkritik geboten; d. h. die Fragen zu berücksichtigen, wer zu wem spricht, in welchem Zusammenhang, mit welcher Intention (Sprecher und Autor sind hier mitunter zu differenzieren), über welchen Gegenstand; welche Kenntnis der Autor vom behandelten Gegenstand bzw. Ereignis (bestenfalls) gehabt haben kann, was mutmaßlich seine Informationsquellen waren, welche Erzählelemente der Topik verdächtig sind; kurz, wie weit das Zeugnis glaubwürdig ist.

Um ein beliebiges Beispiel anzuführen: Livius (4.61.5–10) überliefert in wenigen Sätzen folgende Begebenheit: Das

³ Korfmann 1990, 204–6; zur Einschätzung von Schliemanns Quellenverständnis knapp Korfmann 1990, S. VII–XXIX.

⁴ Steinby 1993–2000.

römische Heer initiiert eine Belagerung einer volskischen Stadt Artena; die Belagerten machen einen Ausfall durch ein Tor; die Belagerer können diese Gelegenheit nutzen, im Gegenzug durch das Tor einzudringen; die Verteidiger flüchten in die befestigte Burg; die Römer belagern daraufhin die Burg; diese fällt schließlich durch Verrat; die Stadt wird von den Siegern zerstört. Es begegnen also typische Erzählmotive, wie sie ähnlich in Dutzenden vergleichbarer antiker Schilderungen vorkommen. Die Episode hier handelt freilich im ausgehenden 5. Jh. v. Chr., überliefert von einem augusteischen Autor. Die Quellenfrage die republikanische Frühzeit betreffend ist vielfach kontrovers diskutiert;⁵ allein es darf als unwahrscheinlich gelten, dass Livius bzw. die von ihm verwendeten annalistischen Vorgänger über irgendeine zeitnahe authentische Schriftquelle verfügt haben, die dieses unbedeutende Ereignis derart ausführlich überliefert haben könnte. Mag der Schilderung im Kern daher eine tatsächliche historische Begebenheit zugrunde liegen, so ist sie doch mit topischen Elementen des historiographischen Sujets ‚siegreiche Belagerung und Eroberung‘ ausgeschmückt und ist darin ein charakteristisches Zeugnis der Geschichts(re-)konstruktion betreibenden annalistischen Historiographie. – Christian Winkle sowie Peter Attema und Tymon de Haas diskutieren in ihren Beiträgen ebenfalls den Quellenwert des Livius, der je nach Epoche und Ereignis durchaus differenziert einzuschätzen ist. – Der zitierten livianischen Passage stehen andererseits detaillierte Schilderungen von Belagerungen durch Autoren wie Thukydides, Flavius Josephus oder Ammianus Marcellinus gegenüber, die mit der jeweiligen Topographie vertraut waren und als Zeitzeugen wie auch militärisch Sachverständige berichten, die teils sogar selbst als Akteure am beschriebenen Geschehen teilhatten. Auch diese Quellen sind keinesfalls per se ungeprüft heranzuziehen, da sie ebenfalls mit bestimmten Intentionen und zeit- und genretypischen Stilmitteln der Erzählweise berichten; indes verdienen sie aufgrund der genannten Voraussetzungen graduell mehr Glaubwürdigkeit als manch andere Autoren bzw. Zeugnisse.

Es ist hier nicht der Moment, einen Überblick über die Autoren oder auch nur die literarischen Genres der antiken Überlieferung zu bieten, die Informationen der einen oder anderen Art zu Befestigungen bieten.⁶ Die

Bandbreite der Textsujets reicht von der Historiographie, biographischer Geschichtsschreibung, perihegetischen und ethnographischen Autoren, Fachschriftstellern der Themenbereiche Poliorketik/Kriegführung oder Architektur, Verfassern von *exempla*-Literatur, panegyrischen Autoren bis hin zu Gattungen der Lyrik. Ähnlich weit gefächert ist das inhaltliche Spektrum bezüglich der Befestigungsbauwerke: Berichte von Kämpfen und Belagerungen (mitunter auch von detaillierten Umständen für deren Erfolg bzw. Scheitern); häufiger jedoch knappe Erwähnungen des schlichten Umstandes, dass ein Ort zu einem Zeitpunkt (un-) befestigt war. Detailangaben hinsichtlich der Architektur des Bauwerks, konkreter Baumaßnahmen, zur Bautechnik sind vergleichsweise spärlich. Die Schriftquellen sind daher in der Regel vorrangig für den Datierungsaspekt und ereignisgeschichtliche Zusammenhänge von Interesse, für die bauliche Gestalt im Einzelnen oder Fragen der Bauorganisation hingegen eher selten.

Ein weiteres methodisches Problem ist ebenfalls in den hier versammelten Beiträgen mehrfach exemplifiziert: die Frage der Koinzidenz von Textaussage und Baubefund; etwaige Widersprüchlichkeiten beider sind entsprechend der jeweiligen Indizienlage zu bewerten.

Neben den inhaltlichen Aspekten ist im Einzelnen auch die Wortwahl eines Autors zu beachten. Eine systematische Zusammenstellung von antiken Termini des Bereichs ‚Befestigungswesen‘ zu erarbeiten, war nicht Anliegen der Netzwerk-Diskussionen und bliebe noch zu leisten. Einen beispielhaften Überblick zu den Begrifflichkeiten für ‚Befestigung‘ (wie *phrourion* und *teichos*) zumindest der frühen griechischen Quellen bietet eine Besprechung von Rune Frederiksen,⁷ der auch die Grundlagen des methodischen Umgangs mit antiken Schriftzeugnissen eingehender erörtert.

Verglichen mit der Überlieferungslage späterer Geschichtsepochen sollte stets rememberlich sein, dass für die Antike nur ein Bruchteil an Informationen verfügbar ist. Das betrifft zuvorderst die sehr beschränkte Auswahl dessen, was den Autoren überhaupt überlieferungswürdig war; ferner die Quantität dessen, was bis heute erhalten geblieben ist. Die Mehrzahl interpretatorischer Fragen zu den antiken Befestigungen wird anhand der schriftlichen Überlieferung nie zufriedenstellend zu klären sein.

⁵ Ein Überblick zur Frage der Quellen der frühen römischen Historiographie bei Beck & Walter 2001, 17–50; Beck & Walter 2004, 17–31.

⁶ Dazu eingehender Frederiksen u. a. im Druck.

⁷ Frederiksen u. a. im Druck, vgl. auch Frederiksen 2011, 9–38; zu einigen entsprechenden lateinischen Termini s. den Beitrag von Christian Winkle in diesem Band.

Der Stellenwert der *epigraphischen* Zeugnisse soll hier nicht näher gewürdigt werden. Die zahlenmäßig geringe Gruppe der Bauinschriften und Bauurkunden ist, als authentische Primärquelle vergleichbar dem Monument selbst, von außerordentlicher Bedeutung.⁸

Einige Ausführungen seien abschließend noch bezüglich der *Bildquellen* angeschlossen. Die antiken Abbildungen von Befestigungsbauten sind meines Wissens noch nicht gattungs- und kulturübergreifend systematisch behandelt; auch im Rahmen der Netzwerk-Diskussionen konnten sie nur kursorisch einbezogen werden.⁹

Die bildliche Wiedergabe von Militärarchitektur ist bekanntlich bereits der minoisch-mykenischen, ferner auch der assyrischen Kunst vertraut. Im griechisch-römischen Kulturkreis sind Darstellungen von Befestigungen in unterschiedlichsten Bildmedien vertreten: Vasenbilder, verschiedene Genre von Reliefskulptur, Wandmalerei und Mosaiktechnik, Kleinkunst wie Münzbilder und Gemmen etc. Die Darstellungsmotive variieren dabei erheblich: mythische wie zeitgenössische Kampf- und Belagerungsszenen, aber auch Stilleben etwa des sakralidyllischen Genres. Oft dient die Befestigung vorrangig als Kulisse einer figürlichen Handlung (zumal bei den Kampfbildern), während sie nur selten Hauptmotiv ist. Die ikonographische Grundformel ‚(zinnenbekrönte) Mauer mit Türmen/Toren‘ war in beiden Fällen leicht verständlich und assoziationsträchtig. Vielfach ist dieses eingängige Motiv lediglich formelhaft für die Angabe einer Stadt bzw. allgemein von ‚Stadt‘ verwendet; in dem Fall war die darstellerische Herausforderung obsolet, den Ort als einen bestimmten eindeutig kenntlich machen zu müssen.

Für den Vergleich mit realer Wehrarchitektur sind die Bilder von unterschiedlichem Wert; abhängig vom Maßstab des Bildes, seiner Qualität bzw. Detailgenauigkeit, dem Abstraktionsgrad, dem Zweck der

Darstellung, den ikonographischen und den jeweiligen gattungseigenen Konventionen. Meist ist die Befestigung in einem Miniaturstil wiedergegeben und mehr oder minder schematisch. Einige Details sind gleichwohl bedeutsam für Vergleiche mit den Monumenten. Ein typisches Merkmal der griechisch-römischen Darstellungen ist etwa die häufige Textur der Mauer in Form gleichmäßigen Quadermauerwerks, was als Reflex eines entsprechenden ästhetischen Ideals der realen Architekturpraxis gelten kann. Besonders wichtig sind ferner Details, die üblicherweise im Baubefund verloren sind: die Aufbauten des Wehrgangs, Türen und Fenster, Dächer, hölzerne Anbauten. Exemplarisch sei für einige römische Reliefdarstellungen auf das kleine Detail von Schießscharten-Schlitz in den Zinnen hingewiesen:¹⁰ ein Merkmal, das für die Kampfweise auf dem Wehrgang relevant ist, aber kaum je im baulichen Befund nachzuweisen sein dürfte und vermutlich auch nicht in Schriftzeugnissen belegt ist. Quellenindizien wie diese sind über die rein architektonischen Details Aspekte hinaus letztlich auch für kontrovers diskutierte Fragestellungen des ‚Kontextes‘ von Interesse, etwa wie weit Befestigungen ästhetischen Bewertungsmaßstäben unterlagen, wie weit gerade kaiserzeitliche Stadtmauern womöglich mitunter mehr Repräsentations- als Zweckbau waren. Die Beobachtung, dass das Mauermotiv gerade in spätrömischer Zeit ein ‚offizielles‘, mithin als adäquat empfundenes Motiv der Münzprägung wurde, ist mentalitätsgeschichtlich für diese Epoche gewiss nicht minder aufschlussreich.

Umfassende Beobachtung und Bewertung des Baubefundes, methodisch achtsamer Umgang mit den Schriftzeugnissen, mitunter sogar Vergleiche mit bildlichen Darstellungen: Jede dieser Herangehensweisen bietet Aufschluss für jeweils bestimmte Themenaspekte ‚historischen Kontextes‘ antiker Wehrbauten. Ein tieferes Verständnis des individuellen Monuments bedarf daher einer möglichst breit angelegten Betrachtungsperspektive.

⁸ Grundlegend zu den epigraphischen Zeugnissen noch immer Maier 1959 und Maier 1961.

⁹ Frederiksen u. a. im Druck.

¹⁰ Vgl. Frederiksen u. a. im Druck; exemplarisch ein kaiserzeitliches Relief mit einer Stadtdarstellung in Celano: <<http://arachne.uni-koeln.de/item/objekt/219569>>, täglich aktualisiert (letzter Zugriff am 07.3.2014).

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DEFENCE, ATTACK AND THE FATE OF THE DEFEATED: REAPPRAISING THE ROLE OF CITY-WALLS

Pierre Ducrey

Abstract

Just over 30 years ago, in December 1982, the first major international conference on ancient fortifications took place at Valbonne; the proceedings, edited by Pierre Leriche and Henri Treziny, were published in 1986.¹ Since then, many more works on ancient fortifications and on the defence of cities and their territory have appeared, and the conference commemorated in this volume testifies to how interests in this area have developed and knowledge of it has advanced.² Historians continue to discuss the role of fortifications and how effective they were at protecting a town's inhabitants, and to consider the way in which conquered peoples were treated. The subject remains a live issue in the study of ancient history, but recently a new perspective has been proposed: in a book published in 2012, *Les revers de la guerre en Grèce ancienne*, the French historian Pascal Payen suggests that scholarly views about war in ancient Greece and its ramifications for soldiers and civilian populations should be re-evaluated. His arguments will be discussed below. The *Inventory of Archaic and Classical Poleis* (2004), with its highly systematic and careful survey of the relevant (mostly literary and epigraphical) evidence, offers a number of interesting perspectives on many of the questions discussed in this paper.

Sieges and their consequences

A siege could end in a number of different ways. A successful resistance could be mounted and the city saved from potentially mortal danger. But it might also be taken by force, with terrible results for the population: the defenders put to death, and the old men, adolescents, women and children enslaved. Between these two extremes there were many different possible scenarios, and the defenders and the inhabitants could

be treated with varying degrees of harshness. When a place was besieged by a powerful enemy, the inhabitants may have had the option of surrendering according to an agreement. This tended to mean that the defeated side suffered less, at least in material terms.

Since the 18th century, scholars working on the law of nation (*ius gentium*, in French, 'le droit des gens') and, more specifically, the law of war have tended simply to state that, when Greek states engaged in armed conflicts

¹ Leriche 1986.

² On a personal note, ancient cities under siege and the soldiers and civilians within them have been central themes in my research since 1968.

against each other, the inhabitants of captured cities were either killed or enslaved. But it is worth noting that the most frequently cited passages do not mention defenders being killed. Xenophon's *Cyropaedia* puts it thus: 'it is an eternal law applicable to all that when a city is captured by enemies, everything within, both the inhabitants and their property, belongs to the captors' (Xen. *Cyrop.* 7.5.73).³ In another passage, in the *Memorabilia*, Xenophon has Socrates say that if a general storms a town and enslaves its population, he will be doing nothing wrong (*adikein*) as long as the town is hostile and has acted in an unjust way (Xen. *Mem.* 4.2.15). A survey of a thousand or so years of Greek history, however, reveals that the situation was more complicated than sweeping statements of this kind suggest. Moreover, historians can choose to emphasize different aspects of the evidence: it can be shown that arbitrary actions and violence were often tempered by humanity and restraint, or stress can be laid on the acute acts of brutality and cruelty that war entailed. Pascal Payen takes the latter approach when he focuses on 'the other side of ancient Greek warfare' ('les revers de la guerre en Grèce ancienne').

Greek city fortifications: a deterrence strategy

Since fortifications are the central theme of this volume, it is appropriate to begin this discussion by considering cities' defensive systems. The strategic function of imposing, well-maintained ramparts defended by highly motivated troops was to dissuade enemies from staging an assault, and to compel them to engage in a long and expensive siege. Ramparts essentially served as a deterrent, but this failed if the aggressors, refusing to be impressed, undertook a siege. The same principle applies to nuclear arms, at least since World War Two. Since then, fortunately for the world, there have so far been nuclear deterrents of sufficient weight to prevent any of the nations who possess nuclear weapons from making use of them against an enemy. Of course, ramparts are not an ultimate weapon of deterrence and sieges did in fact take place. When they did, the besieged had two options: all-out resistance, which if it failed would lead to the capture of the town by force, and negotiation. Terms of surrender usually allowed the defenders and civilian inhabitants to leave the town, taking with them basic essentials that were often explicitly specified in an

agreement: the defeated were authorized to leave the town as free individuals, with a single item of clothing.

The history of siege warfare in ancient Greece begins at Troy, although the citadels of Mycenae and Tiryns are eloquent testimony to the fact that the Mycenaean principalities were the first states in Greece to consider how to deter their enemies from undertaking a siege. It is not known whether these citadels fell to a siege or if the collapse of the Mycenaean civilization was due to other causes. Obviously there is no way of determining the function of the 'Cyclopean' ramparts and how useful they were in the event of an attack. There is only one known example from the Mycenaean world, which is attested by the Siege Rhyton from Shaft Grave IV at Mycenae. The myths and legends about Troy serve as an exemplary illustration of all the issues pertinent to the defence and fall of a city. Troy had fine ramparts but they did not deter the Greeks from keeping up their siege. They remained unassailed for ten years, and it was only a stratagem that allowed them to be breached. In historical times, stratagems – in the form of treason – often offered an alternative to an attack. Recourse to treason may be seen as indirect proof that ramparts were effective as, without the help of an ally within who was willing to open the gates, the outer wall would have remained impossible to break through.⁴ Some examples from the history of Eretria (a site on which I have worked extensively for the past four decades), and from Euboean history in general, will make clear the risks that defending a place entailed. As is well known, the Persian expedition laid siege to Eretria in the summer of 490 BC, shortly before landing at Marathon. Herodotus notes that 'the Eretrians sought only to try and defend the city walls'; after an assault lasting six days, the city had not fallen. On the seventh day it was betrayed to the Persians (Hdt. 6.101). Three other sieges of Eretria are also attested or at least probable. The first one occurred c. 268/267 BC, during the Chremonidean War (Diog. Laert. II, 127). Livy, certainly based on Polybius, describes in detail the one undertaken by Roman and Pergamene forces in 198 BC, and reports that 'Eretria was attacked with the utmost force' (*summa vi oppugnabatur*), while the defenders did not put up much of a fight. Eventually, when they saw how many casualties there were, they considered surrendering, not least because part of the rampart had been partly knocked down (*muri partem eversam*). In the hope of negotiating a peace, 'they posted guards only

³ Hansen & Nielsen 2004, 120, n. 9.

⁴ Ducrey 2012.

on the section of the wall that had been levelled'. This allowed Titus Quinctius Flamininus to capture the town with a surprise attack. 'There was not much money, gold or silver to be found, but there were more statues, antique paintings and other such ornamental items than would have been expected from the number of inhabitants and the city's other assets' (Livy 32.16.10–17). Denis Knoepfler has suggested that the last siege took place most probably in 86 BC, during Sulla's campaign in Euboea. Another notable episode in Euboean history was the raid that in 199 BC surprised the defenders of Chalcis as they slept. A small unit entered the town and opened the gates to the main body of the Roman army. Fire and slaughter ensued (Livy 31.23.3–5).

From the capture of Troy to the three Euboean incidents of 199–198, large numbers of towns in the Greek world underwent sieges. In a previous study I included the following table:⁵

Pitched battles (120)		Sieges (100)	
Massacre	24 (20%)	Defenders massacred	25 (25%)
Enslavement	28 (24%)	Enslavement	34 (34%)
Unspecified	68 (56%)	Surrender, expulsion, exile	41 (41%)

Table 1 Table of statistics showing the fate experienced by the defeated side in 220 battles

Several scholars have subsequently offered opinions on these statistics. Still, as the present study is concerned with what happened to cities, at the risk of being a little schematic it will be helpful to focus on two aspects of the effectiveness of their defence. It may be posited that fortifications did not always fulfil their function adequately as, of the 100 cases cited above, 59 resulted in the massacre or enslavement of the besieged side. Still, there remain the 41 in which a city's inhabitants were able to leave, free and alive. Moreover, enslavement, which happened in about a third of the cases cited, is obviously a cruel fate, but it is nevertheless preferable to death. Those who work on mass enslavements in the Graeco-Roman world are greatly indebted to historians of the Mainz School, who have studied this topic in detail.⁶ W. Kendrick Pritchett also devotes several chapters of his book *The Greek State at War* to a discussion of the

defeated and what happened to them.⁷ More recently, P.B. Kern too has a chapter on how the inhabitants of a captured town were treated.⁸ Finally, there is Pascal Payen's aforementioned work.

The fate of the defeated

In addition to the question of how effectively ramparts ensured the safety – indeed, the freedom and survival – of a town's inhabitants, it is important to consider what standards modern scholars should use to assess war in the ancient world. In particular, the treatment to which defeated parties were subjected, especially when their city was stormed, has the potential to generate debate. Pascal Payen has recently stressed the prominent role played by violence throughout Greek history, from the Archaic era to the Hellenistic period. From a perspective implicitly and sometimes explicitly influenced by contemporary attitudes, he assesses how wars were waged by the Greeks and focuses especially on how they treated their enemies in defeat. He highlights in an unprecedented manner the violence by which conflicts were characterized, and draws attention to the plight of the victims, both soldiers and civilians. Taking 'the other side of Greek warfare' as his title, he discusses (with reference to literary more than iconographic sources) the practical aspects of such situations that until now have rarely been taken into account. His work considers such phenomena as the rape of women, torture, brutality and massacres.

Ancient historians and tragedians rarely include explicit details about what happened to those who lost a battle. Payen, however, draws out the hints found in the sources. He shows what almost certainly occurred in reality, even though it is obscured in written texts and other depictions that proceed more by allusion than by factual description. In fact, although he does not admit to doing so, he contests the notion of the 'Greek miracle'. From a 21st-century perspective, it is natural to sympathize with such a challenge to an idealized if not naïve vision of Greek history, and especially of warfare between Greeks, and it may be tempting to project back into the past a kind of modern moral outrage at the horrors of war. But this anachronistic approach can be unhelpful: at that time, Amnesty International did not exist. Moreover, it

⁵ Ducrey 1999, XV. Hansen & Nielsen 2004, 1363–4 discuss part of the evidence for this.

⁶ Volkmann 1990.

⁷ Pritchett 1971–91.

⁸ Kern 1999, 134–62.

is too easy to forget the dreadful brutality of the wars fought in Asia or Africa in the last few decades, to say nothing of the conflicts that caused so much bloodshed in the former Yugoslavia in the 1990s. The mere name of Srebrenica evokes the tragic events of July 1995, in which several thousand men were executed, and great numbers of women and children deported.

Les Grecs sans miracle

This is the title of a book published by Ricardo di Donato in 1983, a collection of articles by the Hellenist Louis Gernet, and it is certainly not appropriate here to revive the idea of the ‘Greek miracle’ and try to show that the Greeks waged their wars like gentlemen: it will suffice to refer to the inset illustrations on the relief amphora from Mykonos, which show the fall of Troy and the horrific events that followed. The vase’s neck is decorated with a picture of the Trojan horse containing Greek warriors whose heads and weapons emerge from several open ‘portholes’ in the horse’s side. The inset illustrations on the front of the amphora’s belly show soldiers committing acts of violence against women and small children being murdered, run through with large swords. Of course this recalls the death of Astyanax (Figs 1 and 2). Another classic scene from the ‘Ilioupersis’ is found on an amphora by the Kleophrades painter, on which several episodes from the sack of Troy are depicted in an entirely unambiguous way (Fig. 3). Like the tragedians, Attic vase-painters did not seek to hide the harsh reality of war.

Several items, however, deserve to be noted. The first is the fact that in the ancient Greek world there was a set of laws and unwritten conventions, generally termed ‘laws of mankind’ or ‘laws of the Greeks’, which constituted a sort of code of conduct. Agreements made between two opposing sides were to be treated with respect, envoys and ambassadors were not to be killed, prisoners were not to be executed in cold blood, and sanctuaries were not to be desecrated. If these conventions failed to be respected, those responsible would be subject to moral outrage and public disapproval. The latter sentiment was expressed in the works of tragedians and historians. While plays put the spotlight on the victims, in their accounts of events historians reported the opinions that were presumably held by leaders and citizens, not without letting their own feelings be discerned.⁹



Fig. 1 The sack of Troy. Greek clay relief storage vessel, about 670–650 BC. Mykonos, Museum. Deutsches Archäologisches Institut, Athen, Mykonos 87.



Fig. 2 The sack of Troy. Greek clay relief storage vessel, about 670–650 BC. Mykonos, Museum. Deutsches Archäologisches Institut, Athen, Mykonos 89.



Fig. 3 The sack of Troy. The rape of Cassandra. Attic red figure hydria by the Kleophrades Painter. About 490–480 BC. Naples, Museo Nazionale (After Ernst Pfuhl, *Malerei und Zeichnung der Griechen* (1923), 3, pl. 378, p. 114).

⁹ Ducrey 1999, 288–332 on the ‘Laws of the Greeks’ and public opinion.

The obvious counter to this is to argue that the unwritten laws were frequently broken and that the opinions of historians, dramatists and the public had no effect on the course of events. Nevertheless, there were many channels by which public opinion could be expressed – in a completely free and independent manner, most of the time. Moreover, a comparison with the empires of Mesopotamia and of the Egyptian kingdom in the same period reveals a startling contrast: the cruelty with which these regimes treated the people they conquered was much more severe than that inflicted by the Greeks on their worst enemies. The Assyrians' and Egyptians' brutality towards their enemies and even their subjects was incomparably worse than what is known about the Greeks' behaviour in wartime. Any judgement passed on the wars waged in Greece in the first millennium BC must avoid two pitfalls: it must not fail to take into account what was usual in neighbouring societies at the same time, and it must not unthinkingly apply to ancient history an approach determined by modern standards.¹⁰ Moreover, the sources suggest that many cities of which the entire population was supposedly enslaved did not disappear, and within a few years had recovered. Some of them were captured as a result of the actions of traitors. The latter were certainly not enslaved, even if the other inhabitants were deported.¹¹

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¹⁰ Rey 2012 and this volume pp. 34–42.

¹¹ See Ducrey 2012; Hansen & Nielsen 2004, 122.

NEUE FORSCHUNGEN ZU DEN BEFESTIGUNGEN VON EPHEOSOS IN ARCHAISCHER UND KLASSISCHER ZEIT: ARCHÄOLOGISCHER BEFUND UND SCHRIFTQUELLEN*

Michael Kerschner

Zusammenfassung

In Ephesos wiesen die neuen Grabungen an der Nordostseite des Panayırdağ einen Mauerring nach, der im frühen 4. Jh. v. Chr. errichtet und im zweiten Viertel des 3. Jh. v. Chr. zerstört wurde. Diese neue archäologische Evidenz wird den literarischen Quellen zur Belagerung der Altstadt von Ephesos durch den Lyderkönig Kroisos gegenübergestellt. Es zeigt sich, dass die von Herodot überlieferte Befestigungsmauer der ‚Altstadt‘ nicht jene auf dem Panayırdağ gewesen sein kann, sondern vielmehr auf dem Ayasoluk-Hügel gelegen haben muss. 2007 ergab die Grabung auf dem Ayasoluk-Hügel einen neuen Terminus ante quem von ca. 300–250 v. Chr. für den dort freigelegten kurzen Mauerabschnitt, der zuvor in die späte Bronzezeit datiert worden war. Die eigentliche Errichtung der Befestigung der Altstadt auf dem Ayasoluk kann jedoch um einiges weiter zurückreichen. Die parallele Existenz von mehreren Siedlungsarealen, von denen zumindest zwei ummauert waren, wirft die Frage nach der Siedlungsstruktur der Polis Ephesos in vorhellenistischer Zeit auf.

Einleitung

Die Datierung stellt bei der Erforschung von Befestigungsmauern eines der größten Probleme dar.¹ Nur wenige Anlagen wurden in ihrem gesamten Verlauf

systematisch mit Grabungsschnitten untersucht, und selbst wenn stratigraphische Evidenzen vorliegen, mangelt es darin mitunter an datierenden Funden.² Literarische Quellen lassen sich oft nicht eindeutig mit einer bestimmten Mauer bzw. einer spezifischen

* Den Organisatoren Rune Frederiksen, Silke MÜTH, Peter I. Schneider und Mike Schnelle, danke ich für die Einladung zu der Konferenz „Fokus Fortifikation“, die allen Teilnehmenden einen intensiven, vielschichtigen und nachhaltigen Austausch von Erfahrungen und Ideen bot. Weiterhin gilt mein Dank der Grabungsleiterin von Ephesos, Sabine Ladstätter (Wien), die die systematischen Feldforschungen zur vorhellenistischen Stadt seit 2008 ermöglichte und tatkräftig unterstützte. Mustafa Büyükkolancı (Denizli), dem Grabungsleiter des Stadtareals auf dem Ayasoluk, danke ich für seine stete Bereitschaft zu kollegialem Austausch und wissenschaftlicher Zusammenarbeit, die es erst erlauben, Ephesos in seiner Gesamtheit zu verstehen. Die hier vorgestellten Datierungen der Fundkontexte zur Befestigungsmauer auf dem Panayırdağ beruhen auf der Auswertung der Keramikfunde durch Ireen Kowalleck (Wien), Mark Lawall (Winnipeg) und Alexandra von Miller (Wien). Für Auskünfte und Kommentare danke ich Josef Fischer (Wien) und Robert W. Wallace (Evanston). Ireen Kowalleck, Sabine Ladstätter (beide Wien), Mark Lawall (Winnipeg), Alexander Sokolicek (New York), Martin Steskal und Lilli Zabрана (beide Wien) sowie dem/r anonymen Gutachter/in danke ich für ihre kritischen Kommentare und wichtigen Ergänzungen zu einer früheren Version des Manuskripts.

¹ Ausführlich dazu zuletzt: Frederiksen 2011, 62–9. Vgl. Maier 1961, 93–9; Leriche 1994, 17, 22, 26; Lang 1996, 21–2 mit Anm. 23.

² Grundlegend zur Problematik: Frederiksen 2011, 62–3; 121–213 (der Katalog enthält detaillierte Angaben zur Datierung der einzelnen Befestigungsmauern).

Bauphase verbinden.³ In den meisten Fällen beziehen sich die antiken Autoren auf einen militärischen Angriff und liefern daher nur einen Terminus ante quem für die Errichtung. Epigraphische Zeugnisse, die sich unmittelbar auf den Bau einer Befestigung beziehen, sind vor dem späten 4. Jh. v. Chr. spärlich.⁴ Nur selten kann sich die Datierung von Befestigungsanlagen auf eine Kombination von schriftlichen Quellen und stratigraphischen Evidenzen stützen. In Ephesos liegt eine solch günstige Koinzidenz vor – und dennoch, so wird sich zeigen, wirft die Übereinstimmung von archäologischem Befund und Schriftquellen Probleme auf.

Die Befestigungsmauer auf dem Panayırdağ: Die stratigraphischen Befunde der Grabungen 2008/09

Die vorhellenistische Befestigungsmauer am nordöstlichen Abhang des Panayırdağ (Abb. 1–5) wurde 1926 im Rahmen der von Josef Keil geleiteten Grabungen im Meter-Heiligtum entdeckt.⁵ Daraufhin untersuchte Franz Miltner

den Verlauf des nördlichen Mauerzuges und legte in nur drei Arbeitstagen sechs Suchschnitte an (Sondagen 1/26–6/26 in Abb. 2). Anhand der „spärlichen, neben der Mauer und in einem Versuchsgraben innerhalb der Umfassung gefundenen Scherben“ schlug Keil eine Datierung „um 500 v. Chr.“ vor und interpretierte die Anlage „als eine Art Fluchtburg“.⁶ Obwohl es sich damit um die älteste bekannte Befestigung in Ephesos handelte, wurde sie – abgesehen von einer Begehung durch Peter Scherrer 1994⁷ – in den folgenden 80 Jahren nicht weiter untersucht. Der Verlauf im Westen, Süden und Osten blieb ebenso ungeklärt wie die Funktion und die genaue Datierung.⁸

Um diese Fragen zu beantworten, stellten wir den Nordosthang des Panayırdağ in den Mittelpunkt des 2008 begonnenen Schwerpunktprogramms „Ephesos in vorhellenistischer Zeit“. In zwei Grabungskampagnen 2008/09 untersuchten wir die stratigraphische Einbindung des Mauersockels in acht Grabungsschnitten entlang dem am besten erhaltenen Nordzug (Abb. 3–4). In einem Survey gelang es, die übrigen drei Seiten des Mauerrings nachzuweisen (Abb. 1–2).



Abb. 1 Ephesos. Siedlung an der Nordostseite des Panayırdağ, Ansicht vom Ayasoluk-Hügel. Das in klassischer Zeit ummauerte Areal ist weiß hinterlegt. (Foto N. Gail; Bearbeitung: I. Benda-Weber. © ÖAI Wien).

³ Vgl. Maier 1961, 93; Wokalek 1973, 3; Frederiksen 2011, 69.

⁴ Maier 1961, 16, 21–2, 29, 32, 38.

⁵ Keil 1926, 261; Miltner 1958, 3–4 Abb. 1. Zur Forschungsgeschichte: Michael Kerschner in Kerschner u. a. 2008, 116 Taf. 40.

⁶ Keil 1926, 261. Die genannten Keramikfunde wurden nicht veröffentlicht und sind heute verschollen.

⁷ Scherrer 2001, 60 Abb. 3.1; 3.4.

⁸ Vgl. Scherrer 1999, 384: „Die zeitliche Zuordnung und die Ansicht, die Mauer befestigte als vorübergehende benützte Fluchtburg [...] sind noch genauer zu überprüfen.“

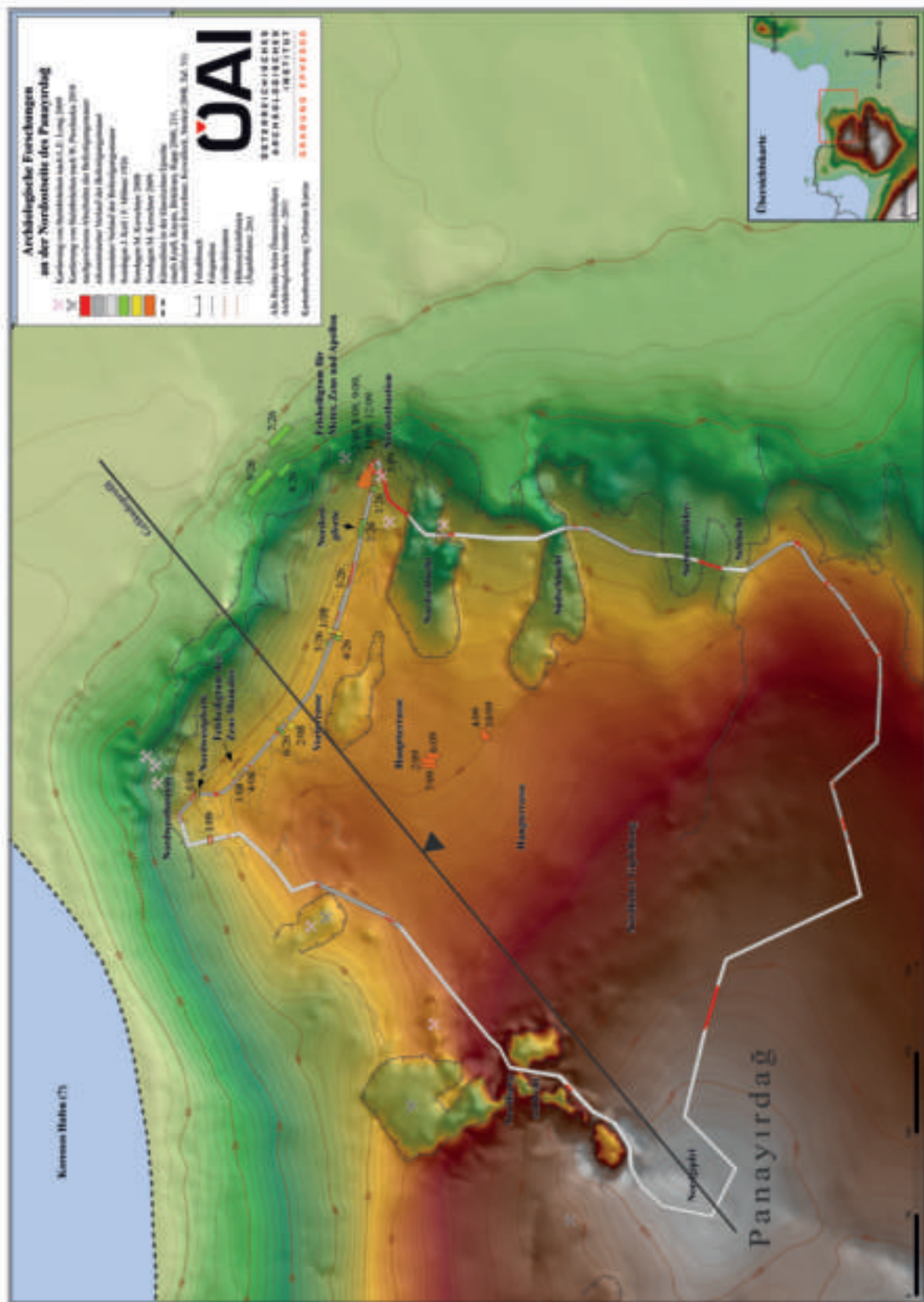


Abb. 2 Ephesos. Siedlung an der Nordostseite des Panayirdağ und ihre Befestigungsmauer aus klassischer Zeit. Kartenerstellung (C. Kurtze. © ÖAI Wien).

Die Befestigungsmauer umschließt eine natürliche Terrasse, die ca. 50–60 m über dem antiken Meeresspiegel liegt, sowie den südlich angrenzenden Hang einschließlich des Nordgipfels des Panayırdağ (Abb. 1–2). Im Osten und Norden ist die Terrasse durch steile Felsabbrüche natürlich geschützt. Nach Nordwesten hin verbindet ein flacherer Hang das Plateau mit der Bucht des Koressischen Hafens.⁹

In einer Reihe von Sondagen (Abb. 2) wurden an verschiedenen Stellen der Nordostterrasse des Panayırdağ Teile von Gebäuden aus der Zeit vom Anfang des 4. Jh. bis in das zweite Viertel des 3. Jh. v. Chr. freigelegt. Weitere Überreste antiker Bebauung wurden bei einem Survey auf dem südlich angrenzenden Hang festgestellt. Drei Argumente sprechen dafür, dass es sich dabei um eine Siedlung handelte: 1. die weite Streuung der Bauten innerhalb der ummauerten Fläche; 2. die große Menge an Keramikfunden, die im Schichtzusammenhang mit den Bauresten ausgegraben wurde; 3. das Spektrum der Gefäßformen.¹⁰

Während keine Kontexte des 5. Jh. v. Chr. angetroffen wurden, lässt sich stratigraphisch eine ältere Nutzungsphase des 7./6. Jh. v. Chr. fassen. In den bisherigen Grabungen wurde allerdings nur an wenigen Stellen jene Tiefe erreicht, in der die archaischen Schichten zu erwarten sind, so dass die Art der Nutzung im 7./6. Jh. v. Chr. noch nicht mit Sicherheit bestimmt werden kann. Das Formenspektrum der archaischen Keramikfunde deutet jedoch auch in dieser frühen Phase auf eine Siedlung.¹¹

Von der Befestigungsmauer haben sich Teile des zweischaligen Steinsockels erhalten, der unmittelbar auf dem gewachsenen Fels errichtet wurde (Abb. 3–5). Seine Breite schwankt zwischen 2,15–2,40 m. Der Sockel ist an der besterhaltenen Stelle in der Sondage 2/08 (Abb. 2, 4) 1,47 m hoch. Die Kalksteinblöcke der Mauerschalen wurden ausschließlich als Läufer verlegt. Sie sind unterschiedlich groß und an ihrer Außenseite rechteckig bis leicht trapezoid. Sie wurden in Lagen verlegt, die allerdings Versprünge aufweisen. Gelegentlich wurden an den Ecken kleine Füllsteine eingefügt. Die Innenfüllung

zwischen den Außenschalen besteht aus dicht gepackten Bruchsteinen (Abb. 5). Am tiefsten Punkt der Nordostecke befindet sich ein Wasserablauf, der sich von innen nach außen trichterförmig verengt (Abb. 3).

Der Oberbau bestand aus Lehmziegeln. Diese waren als massive, weitgehend fundleere Lehmpackung nachweisbar, die in allen Sondagen unmittelbar vor der Außenschale lag. Große Fragmente von Dachziegeln, die sich darin fanden, dienten vermutlich als Abdeckung der Brustwehr zum Schutz gegen die Witterung. Einige unter der Lehmpackung liegende Kalksteinplatten stammen von den obersten Teilen der Befestigungsmauer, wie ihre Fundlage vermuten lässt (Abb. 4 oben). Wahrscheinlich dienten sie als Pflaster des Wehrgangs oder eines Treppenaufgangs.

Nach Aufgabe der Siedlung wurde der Steinsockel über weite Strecken hin abgebaut, um die Blöcke an anderer Stelle wiederzuverwenden. Die Trasse lässt sich aber anhand der charakteristischen Felsbettungen verfolgen (Abb. 2). Die Befestigungsmauer beschreibt ein Trapez von ca. 260 m × 350 m Seitenlänge und umschließt eine Fläche von 9,4 ha. Im Norden und Osten folgt die Trasse den steilen Felsabbrüchen, im Südwesten einer Schlucht, die bis nahe an den Nordgipfel des Panayırdağ heranführt, der als höchste Erhebung mit eingeschlossen gewesen sein muss.¹² An der Südseite, wo der flache Hang keine natürlichen Geländekanten vorgibt, lässt sich die Streckenführung nur teilweise verfolgen. Entlang dem gesamten Verlauf war an keiner Stelle ein Turm oder ein Rücksprung der Befestigungsmauer festzustellen. Nur an den beiden erhaltenen Ecken im Nordosten und im Nordwesten (Abb. 2) ergeben sich aus dem Umstand, dass die Mauer der Kontur zweier natürlicher Felsnasen folgt, bastionsartige Verstärkungen.

Für die Erbauung der Befestigungsmauer ließen sich in den Sondagen an der Nordseite (Abb. 2) kontextuelle Datierungen gewinnen. In Sondage PAN 08/1 (Abb. 5) fand sich spätarchaische Keramik in einem schmalen Fundamentgraben vor der Innenschale sowie in der Innenfüllung des Steinsockels.¹³ Diese Gefäßfragmente rutschten vermutlich in die Baugrube nach, als

⁹ Zur Lokalisierung des bei Hdt. 5.100 und Xen. *Hell.* 1.2.7 genannten Koressischen Hafens: Keil 1922–24, 104; Scherrer & Trinkl 2006, 261–4 Plan 3; Kerschner u. a. 2008, 122, Taf. 39; Stock u. a. 2014, 37 f. 51, 55, 57 Abb. 8.

¹⁰ Die klassische und hellenistische Keramik wurde von Ireen Kowalleck und Mark Lawall unter Beteiligung von Helmut Lotz bearbeitet. Allein die große Menge an Funden spricht für eine permanente Nutzung und gegen die These einer „Fluchtborg“, wie sie Keil 1926, 261 vertrat, allerdings anhand einer damals wesentlich geringeren Materialbasis und ohne die Hauptterrasse feldarchäologisch untersucht zu haben.

¹¹ von Miller 2013, 12–4, 356–7, 374–8.

¹² Im Bereich des Nordgipfels konnte die Trasse aufgrund der intensiven Steinbruchstätigkeit im Zuge der Errichtung der späteren Befestigungsanlagen nicht sicher bestimmt werden.

¹³ von Miller 2013, 356 Taf. 149–52.

man bei der Anlage der Fundamente das bergseitig angrenzende archaische Bodenniveau durchschnit. Die Funde liefern daher einen Terminus post quem für die Erbauung.¹⁴ Den Terminus ad quem setzen hingegen jene Keramikfragmente fest, die in der Sondage PAN 08/2 (Abb. 4) in der Innenfüllung der Befestigungsmauer gefunden wurden und in das erste Viertel des 4. Jh. v. Chr. datiert werden können.¹⁵

Die Befestigungsmauer wurde intentionell zerstört, wie sich anhand der Stratigraphie der Sondagen an der Nordseite, insbesondere in PAN 08/2 (Abb. 4), rekonstruieren lässt. Zuerst wurde der Oberbau aus Lehmziegeln abgetragen und auf die Talseite geworfen. Dies zeigt die Lehmpackung, die sich in allen Sondagen nur vor der Außenschale, nicht jedoch an der Innenseite der Mauer fand. Wäre der Lehmziegelaufbau infolge der Witterung langsam erodiert, hätte der Regen den herabfließenden Lehm auf beide Mauerseiten ungefähr gleich verteilt. Zwar setzte danach eine sekundäre Abschwemmung hangabwärts ein, doch wirkten die erhaltenen Teile des Mauersockels wie ein Damm dagegen. Vor der Innenschale hätten sich demnach zurückgestaute Reste der Lehmmasse finden müssen; das war jedoch nicht der Fall (Abb. 4). Vielmehr zeigt der Befund, dass die Blöcke aus dem Mauerverband gerissen wurden (Abb. 4 im Vordergrund). Bei der Ausgrabung trafen wir sie z. T. noch in Sturzlage an. Dieser Befund zeigt, dass nicht Steinraub, sondern die Zerstörung der Schutzfunktion das primäre Ziel des Abbaus war. Darüber lag in der Sondage PAN 08/2 (Abb. 4) eine Aufschüttung, auf der man ein Gebäude errichtete und dabei Spolien aus dem Mauersockel verwendete. Die Aufschüttung lässt sich anhand der Fundkeramik in das zweite Viertel des 3. Jh. v. Chr. datieren. In die gleiche Zeit oder kurz davor fällt die Zerstörung der Befestigungsmauer.

Nachdem das Spoliengebäude seinerseits im mittleren 3. Jh. v. Chr. aufgegeben worden war, legte man einen Raubgraben an, um Blöcke des Steinsockels der zerstörten Mauer zu entnehmen und andernorts wiederzuverwenden. Der westliche Abschnitt des Nordzuges wurde komplett abgetragen, da er sich näher

an der von Lysimachos verlegten hellenistischen Stadt befand, für die man das Baumaterial benötigte.

Die antiken Berichte von der Belagerung durch den Lyderkönig Kroisos

Bereits für die erste Hälfte des 6. Jh. v. Chr. ist eine Befestigungsmauer in Ephesos überliefert. Herodot (1.26) berichtet, dass der Lyderkönig Kroisos kurz nach seiner Thronbesteigung „als erste Griechenstadt Ephesos“ angegriffen habe. „Als er die Stadt belagerte, weihten die Einwohner sie der Artemis und zogen vom Tempel bis zur Stadtmauer ein Seil. Zwischen der Altstadt, die damals belagert wurde, und dem Tempel liegen 7 Stadien.“¹⁶ Die ersten Regierungsjahre des Kroisos liefern für die Errichtung der Befestigungsmauer des archaischen Ephesos einen Terminus ante quem. Da in der Chronologie des Lyderkönigs jüngst Unsicherheiten erkannt wurden, lässt sich die Thronbesteigung des Kroisos nicht genauer festlegen als auf die Jahre zwischen ca. 580 und ca. 553/44 v. Chr.¹⁷

Es besteht kein Anlass, an den *grundlegenden* Angaben von Herodots Schilderung zu zweifeln:

1. Ephesos war in der ersten Hälfte des 6. Jh. v. Chr. mit einer Mauer (τὸ τεῖχος) befestigt.
2. Ephesos wurde von Kroisos belagert und auch unterworfen. Allerdings sagt Herodot nicht, ob sich die Bewohner ergaben oder ob die Stadt erstürmt wurde.
3. Belagert wurde nur ein Teil der Stadt, und zwar die „Altstadt“ (παλαιὰ πόλις).

Hingegen wirkt das Erzählelement, die Ephesier hätten ihre Stadtmauer durch ein Seil mit dem Tempel der Artemis verbunden, um den Schutz durch die Göttin gleichsam physisch zu bestärken, legendenhaft.¹⁸ Otto Benndorf sah in dem Strategem eine „Vorstellung [, die] im Volksglauben der Griechen wurzelt“ und hielt die Überlieferung für authentisch, worin ihm ein Großteil der

¹⁴ Anders als Keil 1926, 261 annahm, der sich zwar auf Keramikfunde stützte, diese jedoch nicht stratigraphisch interpretierte.

¹⁵ Es handelt sich dabei um Fragmente von Feinkeramik (Bearbeitung Ireen Kowalleck). Einige Fragmente von Transportamphoren aus dem Bodenniveau zur Befestigungsmauer in der Sondagen PAN 08/5 datieren ebenfalls in das 4. Jh. v. Chr. (Bearbeitung Mark Lawall).

¹⁶ Übers. Josef Feix.

¹⁷ Vgl. Cahill & Kroll 2005, 605–8 (mit ausführlicher Diskussion). Haider 2004, 86–7 hält ein noch späteres Datum nach der Eroberung Babylons durch Kyros 539 v. Chr. für möglich und sieht dessen Tod 530 v. Chr. als einzig sicheren Terminus ante quem an. Für einen frühen Regierungsantritt plädiert Wallace in Druck.

¹⁸ Vgl. Fischer 2009, 3 Anm. 7: „Von diesem Strategem, bei dem es sich freilich nur um eine schöne Anekdote handelt [...]“.



Abb. 3 Ephesos. Befestigungsmauer auf der Nordostseite des Panayırdağ, Grabung 2009. Außenseite nahe der Nordostbastion, die drei großen Orthostaten links gehören der frühhellenistischen Ausbauphase an; rechts davon die klassische Befestigungsmauer; im Vordergrund Nischen der obersten Terrasse des Meter-Heiligtums. (J. Eitler. © ÖAI Wien).



Abb. 4 Ephesos. Klassische Befestigungsmauer auf der Nordostseite des Panayırdağ, Grabung 2008, Sondage 2. (S.Büchner © ÖAI Wien).



Abb. 5 Ephesos. Klassische Befestigungsmauer auf der Nordostseite des Panayırdağ, Grabung 2008, Sondage 1. (D. Iro © ÖAI Wien).

späteren Forschung folgte.¹⁹ Zur Untermauerung seiner Auffassung führt Benndorf zwei weitere Beispiele einer physischen An-Bindung an das Heiligtum einer Gottheit mit dem Ziel an, dadurch als sakrosankt zu gelten.²⁰ In beiden Fällen jedoch ließ sich von den Schutzsuchenden eine Verbindung mittels Seil ohne große Probleme realisieren, und darin besteht ein entscheidender Unterschied zur Belagerung von Ephesos durch Kroisos. Das gilt zum einen für „die Mitverschworenen des Kylon“, die unter Druck zwar das schützende Heiligtum der

Athena auf der Athener Akropolis verließen, zu ihrer Rückversicherung aber „einen Faden an die Bildsäule der Göttin“ banden und „ihn beim Herabsteigen in der Hand“ hielten.²¹ Dies trifft zum anderen auch für Polykrates zu, falls er tatsächlich, wie Thukydides (3.104.2) berichtet, Delos mit der Nachbarinsel Rheneia durch eine Kette verband, um sie dem delischen Apollon zu weihen. Zwar musste er selbst an der engsten Stelle immerhin 0,7 km überspannen, konnte dies aber in der Zeit seiner Seeherrschaft tun, ohne behindert zu werden. Genau das

¹⁹ Benndorf 1906, 31. In dem Glauben an die Authentizität schloss sich ihm der überwiegende Teil der nachfolgenden Forschung an, u. a. Keil 1922–24, 101–6; Bammer 1961–63; Brein 1976–77; Karwiese 1985; Peter Scherrer in Scherrer & Trinkl 2006, 69–72.

²⁰ Benndorf 1906, 32.

²¹ Plut. *Sol* 12 (Übers. Otto Seel).

war jedoch bei den von Kroisos bedrängten Ephesiern nicht der Fall. Zu Recht bezweifelt daher Loretana di Libero die Historizität der Überlieferung: „Wie die Ephesier es fertiggebracht hätten, den Belagerungsring zu durchbrechen und zum anderthalb Kilometer entfernten Heiligtum vorzudringen, bleibt fraglich und beweist die Undurchführbarkeit dieser Aktion.“²²

Obwohl das Seil-Strategem also vermutlich nicht historisch ist, sollte die Erzählung den Lesern dennoch glaubhaft erscheinen. Deshalb darf man annehmen, dass die Entfernungsangabe von „7 Stadien“ zwischen der Stadtmauer und dem Artemistempel, Herodots Zeitgenossen im 5. Jh. v. Chr. nachvollziehbar war.²³

Diese Distanzangabe wurde immer wieder herangezogen, um die Lage der noch nicht lokalisierten archaischen Stadt zu bestimmen. Keil schlug einen Kreis mit einem Radius von 7 Stadien vom Artemision aus und kam zu dem Schluss, dass sich die „altionische Stadt“, wie er sie nannte, am Nordwestausläufer des Panayırdağ befunden habe.²⁴ In den folgenden Jahren legte er in diesem Bereich eine Reihe von Suchschnitten an, von denen einige Konzentrationen von klassischer, archaischer und sogar spätgeometrischer Keramik zutage brachten.²⁵ Da diese Funde damals die ältesten waren, die aus Ephesos bekannt waren, sah Keil seine Lokalisierung bestätigt.

Hätte die *παλαιὰ πόλις* am Nordhang des Panayırdağ gelegen, wohin die Entfernungsangabe von 7 Stadien nach Keils Interpretation weist,²⁶ dann müsste die dortige Mauer jene Befestigung gewesen sein, die Kroisos im zweiten Viertel oder um die Mitte des 6. Jh. v. Chr. belagerte.²⁷ Dies widerspricht aber dem oben

dargestellten Schichtbefund der Grabung auf dem Panayırdağ, nach dem die Erbauung in das frühe 4. Jh. v. Chr. datiert werden kann.

Seit Keils Forschungen in den 1920er Jahren hat sich die archäologische Evidenz wesentlich verdichtet, und damit erweiterte und veränderte sich auch unser Bild von der vorhellenistischen Siedlungsgeschichte von Ephesos. Als ältester Fundplatz der Früheisenzeit ist durch die Ausgrabungen von Mustafa Büyükkolancı mittlerweile der Ayasoluk erwiesen.²⁸ Dieser frei stehende, 87 m hohe Hügel lag im frühen 1. Jt. v. Chr. unmittelbar am Meer und bot natürlichen Schutz durch steile Felsabhänge an drei seiner Seiten (Abb. 6–7). Im frühen 1. Jt. v. Chr. wurde er vermutlich als Siedlung genutzt. Der Ayasoluk ist die einzige Fundstelle, die vom 11. Jh. bis in das frühe 8. Jh. v. Chr. in der Landschaftskammer von Ephesos nachweisbar ist.²⁹

Diese Situation änderte sich erst ab dem späten 8./frühen 7. Jh. v. Chr., als die Ephesier begannen, sich an den meerseitigen Hängen des Panayırdağ und in der kleinen Schwemmebene südwestlich dieses Berges (unter der späteren Tetragonos-Agora) niederzulassen.³⁰ Zieht man diese ab spätgeometrischer Zeit hinzugekommenen Siedlungsbereiche sowie die im mittleren 6. Jh. v. Chr. „vergrößerte Unterstadt am Artemision“³¹ in Betracht, so erscheint es plausibel, dass Herodot im Kontrast zu diesen die alte Kernsiedlung auf dem Ayasoluk als *παλαιὰ πόλις* bezeichnete. Diese „Altstadt“ war seiner Schilderung nach ummauert.

Diese Interpretation von Herodot stimmt mit dem Befund der Grabungen 2008/09 an der Befestigung

²² de Libero 1996, 370 mit Anm. 25. Dass die Belagerung schon im Gange war, als man angeblich versuchte, die Seil(e) zu spannen, geht aus der Schilderung des Herodot, noch deutlicher aus derjenigen des Aelian hervor. Vgl. Fischer 2009, 3 Anm. 7; Fischer 2013, 52–4. Karwiese 1995, 32–3 meldet zwar Zweifel an, „wie man die Aktion unbemerkt bzw. ungehindert durchgeführt haben mag“, hält das Seil-Strategem letztendlich aber doch für authentisch.

²³ Zu den Zahlenangaben bei Herodot: Smith 1987, 141–212; Wallace im Druck.

²⁴ Keil 1922–24, 96. 109.

²⁵ Keil 1926, 250–6 Abb. 43–47; Kerschner u. a. 2008, Miller im Druck.

²⁶ Keil 1922–24, 96. 109. 112; vgl. Bammer 1961–63, 141 Abb. 97; Karwiese 1995, 32–3 Karte 1.

²⁷ Am nordwestlichen Ausläufer des Panayırdağ, wo zahlreiche Funde archaischer und klassischer Keramik ebenfalls auf eine Besiedlung deuten, wurden keine Reste einer frühen Befestigungsmauer entdeckt, vgl. Kerschner u. a. 2008, 109–22 Taf. 39 (mit ausführlicher Bibliographie). Angesichts der Ausschnitthaftigkeit der Grabungen und der starken Veränderungen des Geländes in römischer Zeit kann jedoch nicht ausgeschlossen werden, dass die dort vermutete Siedlung ummauert war.

²⁸ Büyükkolancı 2007; Büyükkolancı 2008. Vgl. Scherrer 2001, 58; Kerschner 2006; Scherrer 2007, 324–5 Abb. 2; Michael Kerschner in Kerschner u. a. 2008, 117 Taf. 47–50.

²⁹ Zum Siedlungsmuster im 10.–8. Jh. v. Chr.: Kerschner 2006; Michael Kerschner in Kerschner u. a. 2008, 116–8 Taf. 47–49; Michael Kerschner in Stock u. a. 2014, 51–56 Abb. 8; Kerschner im Druck.

³⁰ Michael Kerschner in Kerschner u. a. 2008, 116–8 Taf. 50–51; Michael Kerschner in Stock u. a. 2014, 54 f. Abb. 8; Miller im Druck.

³¹ Benndorf 1906, 31 unter Bezug auf Strab. 14.1.21: „So wurde bis in die Zeit des Kroisos gewohnt; später aber stieg man vom Berghang herab und wohnte bis auf Alexander um den jetzigen Tempel herum“ (Übers. Martin Steskal). Vgl. zur Interpretation Michael Kerschner & Martin Steskal in Kerschner u. a. 2008, 123–4 (mit älterer Lit.).

auf dem Panayırdağ überein, die nach Auswertung der Stratigraphie zur Regierungszeit des Kroisos noch nicht bestanden hatte. Sie *kann* also vom Lyderkönig nicht belagert worden sein, und daher lag die παλαιά πόλις nicht an der Nordseite des Panayırdağ.³²

Die Lokalisierung der παλαιά πόλις auf dem Ayasoluk, wie sie die Befunde der Grabungen von Büyükkolancı seit 1996 nahelegen, ergibt jedoch eine Diskrepanz mit Herodots Entfernungsangabe von 7 Stadien zwischen dem Artemistempel und der Stadtmauer. Diese Unstimmigkeit sah schon Benndorf, der daraufhin alle unbekannten Parameter der nicht im Detail geschilderten Streckenführung diskutierte: „Dabei ist aber undeutlich, ob das Seil nur um einige oder [...] um alle Säulen des Heiligtums [...] geschlungen wurde und ob es nur bis zur Stadtmauer [...] oder um dieselbe geführt war.“³³ Letztendlich kommt er zu dem Schluss, „daß das Maß [...] auf bloßer Schätzung beruhen konnte, mithin als exact gar nicht beabsichtigt war.“³⁴ Zu überprüfen wäre, ob es sich um einen Abschreibfehler handeln könnte.³⁵ Wahrscheinlicher erscheint mir jedoch eine andere Erklärung: Die „7 Stadien“ sind keine reale Entfernungsangabe, sondern besitzen eine symbolische Bedeutung, wie sie Robert W. Wallace jüngst gerade für die Zahl 7 bei mehreren der Zeitangaben Herodots aufzeigen konnte.³⁶

Die Belagerung von Ephesos durch Kroisos wird noch von zwei weiteren, späteren Autoren – Polyainos (6.50) und Claudius Aelianus (var. hist. 3.26) – geschildert. Die beiden Erzählungen, deren unmittelbare Quelle wir nicht kennen, sind stärker anekdotisch geprägt.³⁷ Im Unterschied zu Herodot geben sie keine Entfernung zwischen Befestigung und Artemistempel an und erwähnen auch die παλαιά πόλις nicht.

Während Herodot nur eine Mauer (τὸ τεῖχος) erwähnt, sprechen die beiden kaiserzeitlichen Autoren explizit von einer Mauer, die mit Türmen (πύργοι) bewehrt war. Sollte die Mauer tatsächlich Türme besessen haben, so ist das ein weiteres Argument gegen eine Identifizierung mit der Befestigungsanlage auf dem Panayırdağ, die keine Türme aufweist. Allerdings kann es sich bei dieser Angabe auch um eine spätere Ausschmückung der Schilderung handeln.

Das Siedlungsmuster von Ephesos in archaischer und klassischer Zeit

Aus der Kombination von archäologischen Befunden und literarischer Überlieferung ergibt sich damit für Ephesos im 7.–4. Jh. v. Chr. ein Siedlungsmuster, das aus mehreren Teilen bestand (Abb. 6):

1. Der παλαιά πόλις auf dem Ayasoluk (Abb. 6, 1). Keramikfunde belegen eine kontinuierliche Nutzung im 1. Jt. v. Chr. von protogeometrischer bis zumindest in frühhellenistische Zeit.³⁸ Aus den oben besprochenen Schriftquellen lässt sich ableiten, dass die Altstadt durch eine Befestigungsmauer geschützt war. Die Belagerung durch Kroisos ergibt einen Terminus ante quem für ihre Errichtung von ca. 580 – ca. 553/44 v. Chr.
2. Die Hauptsiedlung lag nach Strabon (14.1.21) seit der „Zeit des Kroisos [...] um das heutige Heiligtum [der Artemis]“³⁹ (Abb. 6, 2). Diese Unterstadt ist nur schriftlich belegt (s. u.) und wurde von den Ephesiern vermutlich als „Neustadt“ bezeichnet, als Pendant zur παλαιά πόλις auf dem Ayasoluk.⁴⁰
3. Im 7./6. Jh. v. Chr. wurde die Vorterrasse an der Nordostseite des Panayırdağ vermutlich als Siedlung

³² Der nordwestliche Ausläufer des Panayırdağ, an dem Keil die ‚Akropolis‘ vermutete, scheidet aus chronologischen Gründen ebenfalls aus: Michael Kerschner in Kerschner u. a. 2008, 116–8.

³³ Benndorf 1906, 32–3. Zu Bedenken ist weiterhin, dass nicht sicher feststeht, auf welche Variante des in unterschiedlichen Längen überlieferten Maßes ‚Stadion‘ sich Herodot bezog, vgl. Benndorf 1906, 32; Keil 1922–24, 99 mit Anm. 6; Smith 1987, 146 mit Anm. 15. Zu den griechischen Fußmaßen, die dem Stadion zugrunde liegen, und ihren Relationen Büsing 1982, 9 (mit Lit.).

³⁴ Benndorf 1906, 33.

³⁵ Dagegen spricht allerdings die Hypothese von Benndorf 1906, 34–5, dass der kaiserzeitliche Autor Xenophon von Ephesos, seine Angabe: „Von der Stadt bis zum Heiligtum sind es 7 Stadien“ (Ephes. 1.2.2; Übers. Bernhard Kytzler) „lediglich aus Herodot geschöpft“ habe, denn diese Annahme setzt voraus, dass die Zahl bereits in der Antike (spätestens im 2. Jh. n. Chr.) so in Abschriften zu lesen war.

³⁶ Wallace in Druck. Dagegen: Smith 1987, 253: „In particular, Herodotos is accurate with measurements [...]“, doch stützt er sich nur auf wenige Beispiele: Smith 1987, 141–212.

³⁷ Vgl. de Libero 1995, 366–73; Fischer 2009, 2–3 mit Anm. 7; Fischer 2013, 53–4.

³⁸ Büyükkolancı 2007, 24 Taf. 6.4–5; Büyükkolancı 2008, 46, 52 Abb. 17–20, 27–28; Büyükkolancı 2009, 224; Büyükkolancı s. a., 24.

³⁹ Übers. Stefan Radt.

⁴⁰ Vgl. Benndorf 1906, 31.

genutzt (Abb. 1; 6, 3).⁴¹ Vielleicht handelt es sich dabei um einen Stadtteil mit Namen Koressos. Die Lokalisierung dieses Toponyms an der Nordseite des Panayırdağ kann mittlerweile als gesichert gelten.⁴² Für den größten Teil des 5. Jh. v. Chr. konnte bislang keine Nutzung der Terrasse nachgewiesen werden. Diese setzt erst am Beginn des 4. Jh. v. Chr. mit der Errichtung einer Befestigungsmauer wieder ein (Abb. 2–5).⁴³

4. Keramikbefunde belegen die Nutzung weiterer Abschnitte der meerseitigen Hänge im Nordwesten und Westen des Panayırdağ in archaischer und klassischer Zeit (Abb. 6, 4).⁴⁴ Beim derzeitigen Stand der Forschung muss allerdings noch offenbleiben, ob es sich um einzelne, räumlich voneinander getrennte Weiler und Dörfer handelte oder um eine zusammenhängende Besiedlung an den Nord- und Westhängen des Panayırdağ.

5. Die Siedlung in der Schwemmebene unterhalb der späteren Tetragnon-Agora, für die Scherrer im Anschluss an Gerhard Langmann eine Identifizierung mit der Kome Smyrna vorschlug, lässt sich in dem ausgegrabenen Ausschnitt vom Anfang des 7. bis zum mittleren 6. Jh. v. Chr. nachweisen.⁴⁵ Es ist denkbar, dass sich die Siedlung danach aufgrund des gestiegenen Grundwasserspiegels auf den südseitigen Hang zurückzog.⁴⁶ Am Ostrand der kleinen Schwemmebene legte man ab der 2. Hälfte des 6. Jh. v. Chr. Gräber an.⁴⁷ In der 2. Hälfte des 5. und der

1. Hälfte des 4. Jh. v. Chr. wurde der untersuchte Teil des Areals von Gewerbebetrieben genutzt.⁴⁸

Das Siedlungsmuster von Ephesos entspricht also vermutlich dem einer „πόλις κατὰ κώμας“, wie sie Thukydides (1.5.1; 1.10.2) beschreibt.⁴⁹ Diese Struktur bestand jedoch nicht von Anfang an, sondern entwickelte sich im Laufe der spätgeometrischen und archaischen Epoche durch die Erschließung neuer Siedlungsgebiete, die näher an den neuen Häfen lagen, welche aufgrund der fortschreitenden Verlandung verlegt werden mussten.⁵⁰

Die Unterstadt ist die größte Unbekannte in der Topographie des vorhellenistischen Ephesos. Einer systematischen archäologischen Erforschung steht die mehrere Meter hohe Verschüttung durch das Alluvium des Kaystros und seiner südwestlichen Zubringer entgegen (Abb. 1, zwischen Artemision und Panayırdağ; Abb. 6). Bis heute beschränkt sich unsere Kenntnis dieses Bereiches der vorhellenistischen Stadt auf die knappe Angabe bei Strabon (14.1.21) und auf einige wenige Sondagen.⁵¹ Weder Ausdehnung noch Struktur der spätarchaisch-klassischen Unterstadt sind bekannt. Daher wissen wir auch nicht, ob sie befestigt war. Das Gelände, eine von mehreren Flüssen durchzogene Schwemmebene, war jedenfalls nicht einfach zu verteidigen. Besseren Schutz im Verteidigungsfall bot aufgrund ihrer isolierten Hügellage (Abb. 6–7) die παλαιὰ πόλις, und so darf

⁴¹ Keil 1926, 261; Peter Scherrer in Scherrer & Trinkl 2006, 59; Scherrer 2007, 327–8; Michael Kerschner in Kerschner u. a. 2008, 109–18 Taf. 39, 50.

⁴² Die Schriftquellen zu Koressos und die umfangreiche, kontrovers geführte wissenschaftliche Diskussion zur Lokalisierung wurden zusammengefasst von Martin Steskal in Kerschner u. a. 2008, 11–20. Vgl. auch Fischer 2013, 13–4, 20, 23–9, 52, 57, 71.

⁴³ Auf die Schriftquellen, die sich wahrscheinlich oder vielleicht auf diese Befestigungsmauer beziehen, kann im begrenzten Rahmen dieser Detailstudie nicht eingegangen werden. Hier sei auf die Publikation der Grabungskampagnen 2008/09 auf dem Panayırdağ verwiesen, die sich in Vorbereitung befindet. Zu den überlieferten Ereignissen, die in diesem Zusammenhang zu diskutieren sind, zählen der Angriff des Atheners Thrasylos im Jahr 409 v. Chr., der vom Koressischen Hafen ausging – Xen. *Hell* 1.2.7–10; *Hell Oxyrh* 1–2; vgl. Benndorf 1906, 58–9; Keil 1922–24, 103–4; Mohr 2007, 316–20 –, und der Feldzug des Spartaners Thibron 391 v. Chr., der den Berg „Kornissos“ (= Koressos?) besetzte – Diod. 14.99.1; Xen. *Hell* 4.8.17; vgl. Benndorf 1906, 61; Keil 1922–24, 105–6; Brein 1976–77, 67 Anm. 12.

⁴⁴ Keil 1926, 250–6, Abb. 43–47; Scherrer 2007, 328; Kerschner u. a. 2008; Kerschner im Druck; Miller im Druck. Hinzu kommt ein Befund mit archaischer Keramik aus den Grabungen im 3. Diazoma des hellenistisch-römischen Theaters von Ephesos: von Miller 2013, 444 Taf. 173–80; Miller im Druck.

⁴⁵ Zusammenfassend: Peter Scherrer in Scherrer & Trinkl 2006, 59–64 Abb. 75–80 Farbbabb. 5 Plan 6.19; Scherrer 2007, 330–1 Abb. 2; Kerschner im Druck; Miller im Druck.

⁴⁶ Peter Scherrer in Scherrer & Trinkl 2006, 64.

⁴⁷ Scherrer & Trinkl 2006, 149–64.

⁴⁸ Scherrer & Trinkl 2006, 69–148; Scherrer 2007, 331.

⁴⁹ Vgl. Hansen 2000, 161: „[...] acknowledged as an ‚urbanised settlement‘, if only for the fact that often several thousand persons were living in nucleated settlements all within an area of 1–3 km²“; Hansen 2006, 99–100. Vgl. de Polignac 2005, 45–6; Tréziny 2006, 242, 245; Kerschner im Druck.

⁵⁰ Kraft u. a. 2000; Stock 2010; Stock u. a. 2014, 54–60 Abb. 7–8.

⁵¹ Keil 1930, 34–5. Zur Lokalisierung der beiden Suchschnitte aus dem Jahr 1929 und ihrer Interpretation: Ireen Kowalleck in Kerschner u. a. 2008, 124–6 Taf. 51. Keil fand eine Schicht mit Keramik des 5./4. Jh. v. Chr., doch ist nicht eindeutig, ob es sich um Siedlungsschutt handelt. Die Funde wurden nicht vorgelegt und sind heute verschollen. Eine Notgrabung des Efes Müzesi westlich des modernen Friedhofs von Selçuk legte unweit der Sondagen von 1929 vor wenigen Jahren klassische Gräber frei. Das deutet darauf hin, dass die Unterstadt östlich dieser Stelle lag und im Westen, zur Küste hin, von einer Nekropole gesäumt wurde.

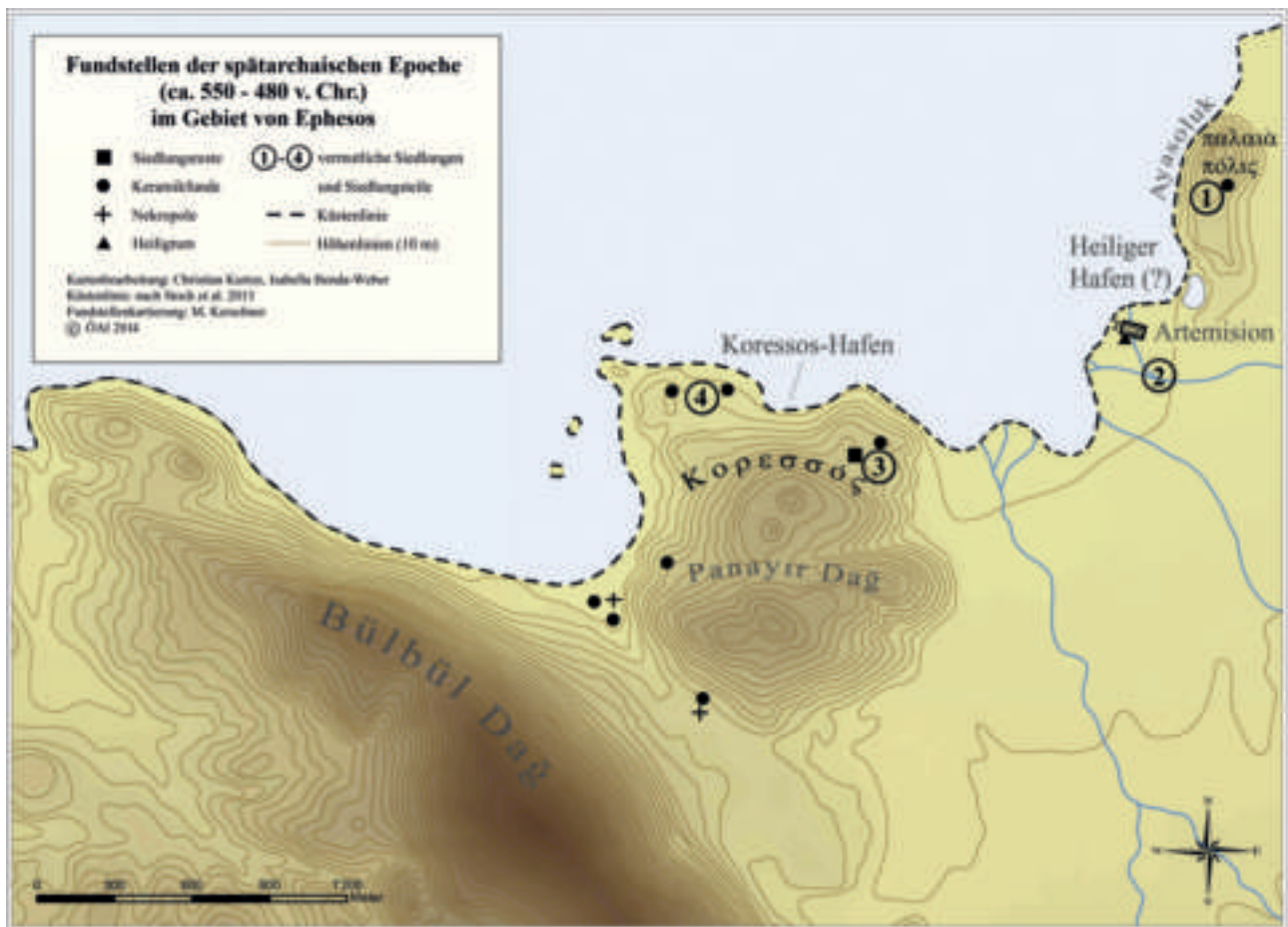


Abb. 6 Ephesos. Fundstellen der spätarchaischen Epoche (ca. 550 – ca. 480 v. Chr.). (Kartenerstellung C. Kurtze; Kartierung: M. Kerschner. © ÖAI Wien).

angenommen werden, dass deren Befestigung nach der Belagerung durch Kroisos restauriert⁵² und auch später weiter in Stand gehalten wurde.

Als man am Beginn des 4. Jh. v. Chr. die Nordostseite des Panayırdağ durch eine Ringmauer befestigte, stand den Bewohnern der Unterstadt von Ephesos im Fall einer militärischen Bedrohung eine weitere Rückzugsmöglichkeit zur Verfügung.⁵³

Die Befestigungsmauer auf dem Ayasoluk-Hügel

Die beiden gut erhaltenen Mauerringe, die den Gipfel des Ayasoluk und den höher gelegenen Teil seines flachen Südhanges einfassen (Abb. 7), stammen aus byzantinischer Zeit und wurden später von den seldschukischen und frühosmanischen Machthabern erneuert.⁵⁴ Der östliche Zug des unteren Mauerrings

⁵² Polyain. 6.50 und Ael. Var Hist 3.26 berichten beide vom Einsturz eines Turmes, der daraufhin „Verräter“ (προδότης) genannt worden sei. Der Quellenwert ihrer Darstellung ist jedoch kritisch zu hinterfragen (s. o.).

⁵³ Unter diesem Aspekt übernimmt die ummauerte Siedlung auf dem Panayırdağ ebenso die Funktion des Typs 2 nach Lang 1996, 23. Und auch die ursprüngliche Vermutung von Keil 1926, 261, dass es sich um „eine Art Fluchtburg“ gehandelt habe, trifft in diesem Aspekt zu, jedoch befand sich innerhalb des Mauerrings – entgegen Keils Annahme – vermutlich doch „eine dauernd bewohnte [...] Ansiedelung“.

⁵⁴ Pülz 2010, 566–7 Abb. 25–26; Büyükkolancı s. a., 13–4.



Abb. 7 Ephesos. Luftaufnahme des Ayasoluk-Hügels von Süden mit den beiden byzantinischen Befestigungsringen, im Vordergrund die Johannes-Basilika, im Hintergrund die Zitadelle, davor die Sondage S 22. (N. Gail. © ÖAI Wien).

nutzt – ungefähr 40 m vor der Stelle, an der er an die Ummauerung der Zitadelle stößt,– über einige Meter hinweg eine ältere Befestigung aus Kalksteinblöcken als Fundament.⁵⁵ 1996 legte Büyükkolancı die Fortsetzung dieser Vorgängermauer nach Südwesten hin auf einer Länge von ungefähr 6 m frei (Abb. 7, Sondage S 22).⁵⁶

In diesem Abschnitt knickt die Mauer zweimal in einem Winkel von ca. 100° um. Die Außenschale ist mit Bruchsteinen hinterfüllt (Abb. 8). Eine eindeutige Innenschale wurde offenbar nicht angetroffen.⁵⁷ In

den untersten Abhüben an der Innenseite „überwogen dann archaische, geometrische und spätmykenische Scherben“,⁵⁸ woraus der Ausgräber damals den Schluss zog, „nicht zuletzt wegen des Keramikbefundes an ihrem Fundament [möchten wir sie nun] als Befestigungsmauer der hethitischen Stadt Apaša verstehen.“⁵⁹ Die Datierung der Mauer in die späte Bronzezeit wurde in der Forschung weithin übernommen und schien die Identifizierung der bronzezeitlichen Siedlung auf dem Ayasoluk-Hügel mit Apaša, der Residenzstadt des westanatolischen Königreiches von Arzawa, zu bekräftigen.⁶⁰

⁵⁵ Büyükkolancı 2007, Abb. 2 Taf. 6.3; Büyükkolancı 2008, 46 Abb. 13c.

⁵⁶ Büyükkolancı 2007, 22–3 Abb. 2 Taf. 6.2–3; Büyükkolancı 2008, 44–6 Abb. 13–15. Die Sondage wurde nach dem Planquadrat 22 S benannt.

⁵⁷ Büyükkolancı 2007, 23: „An der Innenseite der Mauer wurden kleinere unbearbeitete Steine aufgeschichtet, so dass eine Gesamtbreite von etwa drei Metern erreicht wurde.“ Weder auf dem Foto Büyükkolancı 2007, Taf. 6, 2 noch auf dem Steinplan Büyükkolancı 2007, 23 Abb. 2 ist eine Innenschale zu erkennen. Vgl. Büyükkolancı 2009, 224.

⁵⁸ Büyükkolancı 2007, 24 Taf. 6.4–5; Büyükkolancı 2008, 46–7 Abb. 17.

⁵⁹ Büyükkolancı 2007, 23. Büyükkolancı 2007, 24 erklärt die chronologische Durchmischung des „Keramikbefundes“, der immerhin Material mit einer zeitlichen Bandbreite von einem Jahrtausend umfasst, damit, dass „in dieser Sondage keine einzelnen Straten zu differenzieren [sein], da die gesamte Schicht [...] das Ergebnis eines Hangrutsches sein dürfte.“ Eine einfachere Erklärung ergibt sich meines Erachtens aus der hier angewendeten Methode der Abhubgrabung, die an einem Hang fast immer zu einer Durchmischung der existierenden Straten führt.

⁶⁰ Zweifel äußerten allerdings Tréziny 2006, 243 und Zurbach 2006, 283.



Abb. 8 Ephesos. Befestigungsmauer an der Nordseite des Ayasoluk-Hügels. Grabung Mustafa Büyükkolancı 1996 und 2007, Sondage S 22. Ansicht von Südosten. (nach Büyükkolancı 2009, 231 Abb. 8).

Umso wichtiger und von weitreichender Relevanz für die frühe Geschichte von Ephesos ist daher der Befund, den Büyükkolancı bei der vollständigen Freilegung der Außenschale im Jahr 2007 feststellte: „[...] die Datierung der Befestigungsmauern [ist] klar zu bestimmen, [da] auf dem Bodenniveau, das auf einer Fläche außerhalb der Befestigungsmauer lag, die von uns in früheren Jahren noch nicht untersucht worden war, zwei wieder vollständig zusammensetzbare Amphoren zu Tage kamen, die für die Datierung der Befestigungsmauer ein wichtiges Kriterium liefern. Von diesen Amphoren ist die eine ein ephesisches Produkt vom ‚Nikandros Typ‘, die andere aber eine chiotische Amphora. Beide gehören der 1. Hälfte des 3. Jh. v. Chr. an. Diese Daten und die Ähnlichkeit der Befestigungsmauer mit den ephesischen Stadtmauern aus der Zeit des Lysimachos^[61] machen es notwendig, unsere Meinung bezüglich der alten Befestigungsmauern zu ändern, wonach wir sie früher als ‚mykenisch‘ oder als ‚Stadtmauer von Apasa‘ erklärten und in die 2. Hälfte des 2. Jahrtausends v. Chr. datieren wollten.“^[62]

Da auch die Grabung 2007 nach der Abhubmethode durchgeführt wurde,^[63] beruht die Datierung allein

auf den beiden ganz erhaltenen Amphoren, die dem Grabungsbericht zufolge „unmittelbar neben der dritten [Stein-]Lage der Befestigungsmauer gefunden wurden“.^[64] In der beschriebenen Fundlage liefern sie jedoch keinen Terminus ad quem, sondern einen Terminus ante quem für die Errichtung der Befestigungsmauer. Die Amphoren wurden vor der Mauer abgestellt, als diese bereits eine (unbekannte) Zeitspanne lang bestand.

Vergleicht man die technischen und morphologischen Merkmale der nun in der gesamten erhaltenen Höhe freigelegten Mauer (Abb. 8), so zeigen sich deutliche Ähnlichkeiten mit der spätklassischen Befestigungsmauer auf dem Panayırdağ (Abb. 3–5). Der einzige augenfällige Unterschied besteht in dem ausgeprägten Mauervorsprung, der auf dem Panayırdağ in dieser Form nicht vorkommt. Eine mögliche Erklärung dafür wäre, dass diese Mauer durch die Felsabbrüche von Natur aus besser geschützt war als jene auf dem Ayasoluk.

Da der derzeitige archäologische Befund nur einen Terminus ante quem liefert, stellt sich die Frage, ob die Entstehung der Mauer auf dem Ayasoluk nicht in das 4. Jh. v. Chr. zurückreicht, oder vielleicht sogar noch weiter, bis in die archaische Epoche? Können wir darin womöglich sogar ein Stück der Befestigung der *παλαιὰ πόλις* fassen, die Kroisos belagerte? Bevor sich diese Frage beantworten lässt, ist jedoch zu klären, inwieweit der kurze Abschnitt, der 1996 und 2007 freigelegt wurde, für den gesamten zu erwartenden frühen Befestigungsring auf dem Ayasoluk-Hügel repräsentativ ist. Angesichts der wechselvollen Geschichte von Ephesos in archaischer und klassischer Zeit, ist von mehreren Bau- und Reparaturphasen auszugehen.

Eine Klärung ist von den weiteren Grabungen zu erhoffen. Voraussetzung dafür sind an mehreren Punkten des Verlaufs „sondages stratigraphiques pour connaître la date des différentes couches d’occupation associées à la muraille, afin de pouvoir dater celle-ci“, wie sie Pierre Leriche als Grundlage moderner Stadtmauerforschung gefordert hat.^[65]

^[61] Büyükkolancı 2008, 46 sah hingegen im Mauerstil Parallelen zu hethitischen Mauern in Hattuša und Eflatunpınar.

^[62] Büyükkolancı 2009, 224 Abb. 8 (Übers. vom Verf.). Vgl. Büyükkolancı s. a., 24.

^[63] Büyükkolancı 2009, 223: „In der Sondage wurden der Reihe nach von drei unterschiedlichen Niveaus Keramikstücke entnommen, vom 1. Niveau auf 50,18 m Keramik aus dem 2. Jahrtausend v. Chr., dem 7.–6. Jh. v. Chr., dem 4. Jh. v. Chr.; vom 2. Niveau auf 49,91 m Keramik aus dem 2. Jahrtausend v. Chr., dem 7.–6. Jh. v. Chr.; vom 3. Niveau auf 49,67 m Keramik datierte die große Mehrheit der Keramik aus dem 2. Jahrtausend v. Chr.“ (Übers. vom Verf.).

^[64] Büyükkolancı 2009, 223. Die Amphoren selbst sind noch unpubliziert.

^[65] Leriche 1994, 22.

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THE PONTINE REGION UNDER THE EARLY REPUBLIC: A CONTESTED LANDSCAPE

Tymon de Haas & Peter Attema

Abstract

Livy and other ancient authors describe how the Pontine region played a key role in Rome's earliest expansion. Between the late 6th and 4th centuries BC, the Romans would have brought the region under control through the foundation of colonies. However, recent scholarship has problematized the rendering of this colonial past in the literary sources, casting doubt on the nature and existence of these early colonies.

So far, the archaeological evidence (e.g. polygonal masonry fortifications of the colonies) has hardly been studied critically. In an attempt to bring such evidence to the debate, this paper discusses these fortifications in their regional setting. In particular, we focus on the case of Norba, a colony founded in 492 BC on the edge of the Lepine Mountains. We build on the landscape archaeological data collected within the Pontine Region Project, which allows for a detailed reconstruction of the system of fortifications in relation to changes in settlement patterns. In addition, GIS-based techniques (cost path and viewshed analysis) are employed to analyse the coherence and context of these fortifications.

The analysis shows how already before Roman colonization, a complex system of fortifications dominated the settled landscape and controlled the routes through the Lepine Mountains. After the Archaic period, however, Norba gradually became the focal point of this system. The analysis thus sheds new light on the context in which the foundation of this colony took place. It furthermore suggests that a hypercritical attitude towards the historical narrative is perhaps not warranted by the archaeological evidence – even though Norba's polygonal masonry fortifications themselves do not belong to the early colonial phase.

Introduction

Written sources describe how under the last of its kings, Tarquinius Superbus, and after the establishment of the Republic, Rome founded colonies in strategic locations in Latium and Etruria (Fig. 1). These early colonial establishments of the late 6th century to 4th

century BC are part of a turbulent history in which Rome struggled with Latins, Volsci and other tribes for control over central Italy. Only in the course of the 4th century BC, was Rome able to subdue these adversaries and to extend its power over large parts of the Italian peninsula.¹

¹ The events related to Rome's earliest expansion are vividly described in the first books of Livy's *Ab Urbe Condita*.

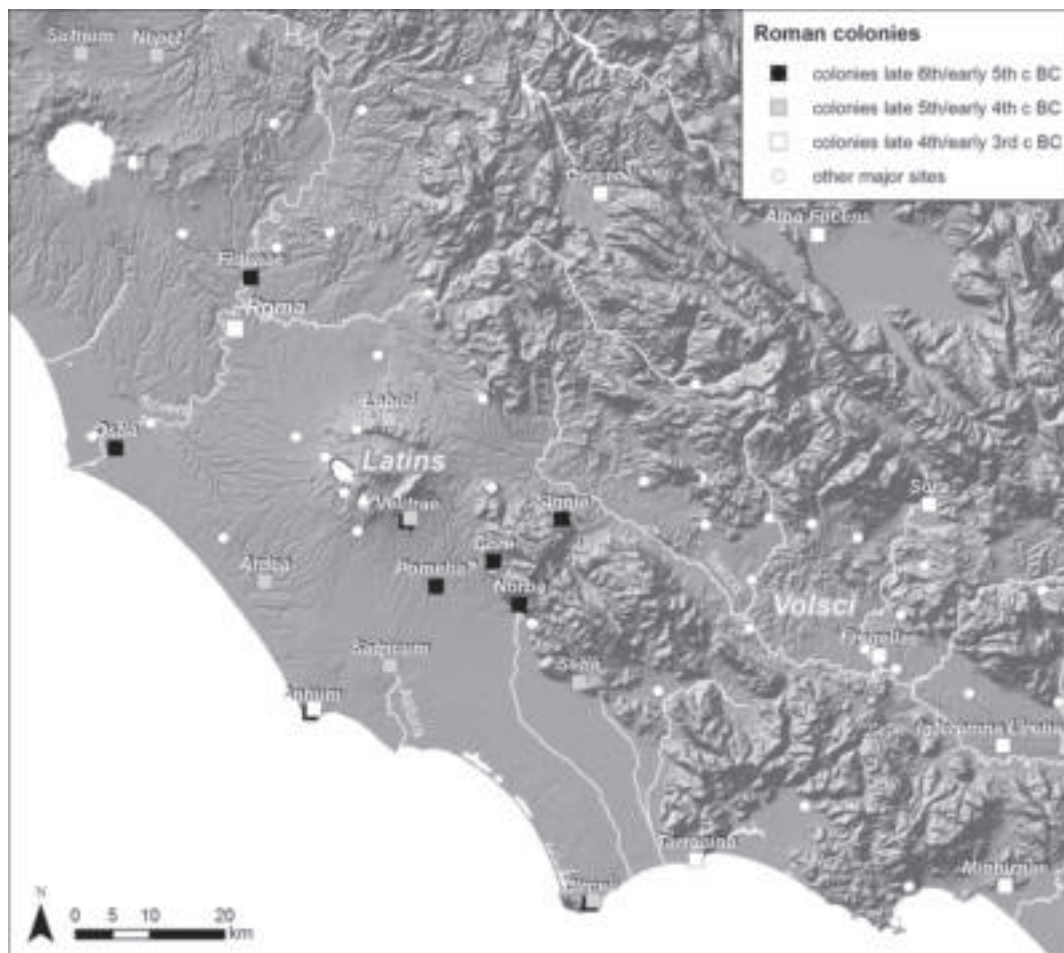


Fig. 1 Central Italy with colonies and other major sites of the 6th to 4th centuries BC (T. de Haas, GIA/RUG).

The most striking aspect of the Roman colonies in central Italy is their monumental fortifications. These impressive terrace walls are constructed in polygonal masonry, a dry-stone technique using large limestone blocks put together in a more or less orderly fashion. Following Giuseppe Lugli, four styles are generally discerned, which reflect an evolutionary scheme in the development of this masonry technique. The 'rough' 1st style was used to construct fortifications and other sorts of terraces from at least the 7th century BC onwards. The more developed 2nd and 3rd style fortifications, often found at Roman colonies, are associated by many scholars with the foundation of colonies in the 5th and 4th centuries BC.²

While the chronological implications of the evolutionary development of polygonal masonry have already been problematized elsewhere,³ the often assumed relation between historically attested colonization events and the construction of polygonal masonry fortifications is also problematic. First, the nature of early Roman colonization is currently the subject of debate, and it is doubtful whether the events referred to in written sources would have entailed the laying out of urban centres with large-scale fortifications.⁴ Second, there is as yet no stratigraphic evidence that confirms the relation between historical foundation dates and the construction of fortification walls.⁵ In cases where such stratigraphic

² Lugli 1965, 30; Quilici Gigli 2004a. It has long been thought that polygonal masonry, also referred to as 'Cyclopic' or 'Pelagic' walls, originated in a mythical past (Attema 1993, 78–9).

³ Quilici Gigli 2004a.

⁴ De Haas 2011, 4–5; Attema *et al.* 2014.

⁵ Dates based on historical information have been proposed for Cosa (Brown 1980, 19–20), Cora (Brandizzi Vittucci 1968, 38), Setia (Zaccheo & Pasquali 1972), and Tarracina (Di Mario 1994).

evidence is available, it in fact argues against a relation with the historical data.⁶

But even if we may relate the erection of fortifications to specific historical events, this actually tells us little about their function and use history. Too little attention has so far been paid to the wider archaeological context of the colonial fortifications. We argue that it is only through contextual studies that we can arrive at a better understanding of the colonies and their fortifications in the long-term development of the Roman colonial landscape.

As an example of such an approach, we will in the following discuss the case of Norba, a Roman colony situated in the Pontine region south of Rome, which is well suited for a contextual study. Firstly, the site itself is thoroughly studied, with stratigraphic evidence to date its walls and extensive knowledge of its urban topography and evolution. Secondly, we have extensive knowledge of the evolution of settlement in its surroundings, which has been investigated thoroughly by topographic studies and archaeological field surveys, the latter carried out by the authors within the framework of the Pontine Region Project.⁷ The detailed data at hand also allow us to use various spatial analysis tools to better understand Norba's position in its regional and local context.

In the following, we will first discuss the landscape and historical context of this case study. We will then review the data on polygonal masonry fortifications, not just at Norba, but also of a number of sites in its direct surroundings. Next, we will discuss the evolution of settlement between the 6th and 4th centuries BC, arguing that the fortified sites around Norba together form a dynamic system that controlled various routes through this strategically important area.

History and landscape of the Norba area

The Pontine region forms the stage for many episodes described in relation to Rome's earliest expansion. In the late 6th and early 5th century BC, the region formed a heavily contested landscape, with various Latin communities who cultivated the land around their urban settlements. It was at several of these Archaic Latin centres that the Romans established colonies. Furthermore, the Volsci and other tribes penetrated the area from the Sacco Valley, both through seasonal pastoral movements and permanent migration. Presumably, demographic pressure in their native territory and the presence of good pasture land in the Pontine Plain formed the major push- and pull-factors for this development.⁸

It is in this context that we should place the long-lasting series of quarrels between Romans, Latins and Volsci described by the written sources, particularly in the first half of the 5th century BC. Sites such as Antium and Satricum repeatedly changed hands between Volsci, Latins and Romans. At both sites, colonies were founded, but these changed hands again after military campaigns or defection.⁹

Such episodes make clear that Romans, Latins and Volsci did not form clear-cut ethnic entities: the long-established communities presumably consisted of both native Latins and Volsci that had migrated from the interior, while the colonist groups could include Romans, Latins and Volsci as well. Therefore, the opposing coalitions perhaps centred upon different towns rather than on ethnic groups, and frequently changed sides opportunistically.

From a historical point of view, Norba's role in these conflicts is obscure. According to Livy, our primary written source, it was founded in 492 BC to provide a stronghold in the Pontine region, and its location indeed visually controls a large stretch of the Pontine coastal plain.¹⁰ However, the site does not occur in any

⁶ For example, the polygonal masonry walls of Norba (founded in 492 BC) have been dated to the second half of the 4th century BC (De Spagnolis 2011, 465). Equally, at Signia (founded in 492 BC) the walls post-date the foundation of the colony (De Rossi 1989; Cifarelli *et al.* 2003). The enclosure wall on the Monte Circeo, often regarded as evidence for the colony of Circeii (founded 393 BC), are placed in the 2nd or early 1st century BC (Quilici & Quilici Gigli 2005).

⁷ For references, see De Haas 2011, 233–9.

⁸ Gnade 2002; Cifarelli & Gatti 2006.

⁹ De Haas 2011, 171–4.

¹⁰ Livy, *Ab Urbe Condita* II, 34. Norba's viewshed includes most of the Pontine plain from Ardea, Lanuvium and Velitrae to the west up to Circeii in the south (see also Van Leusen 2002, 15.9–12).

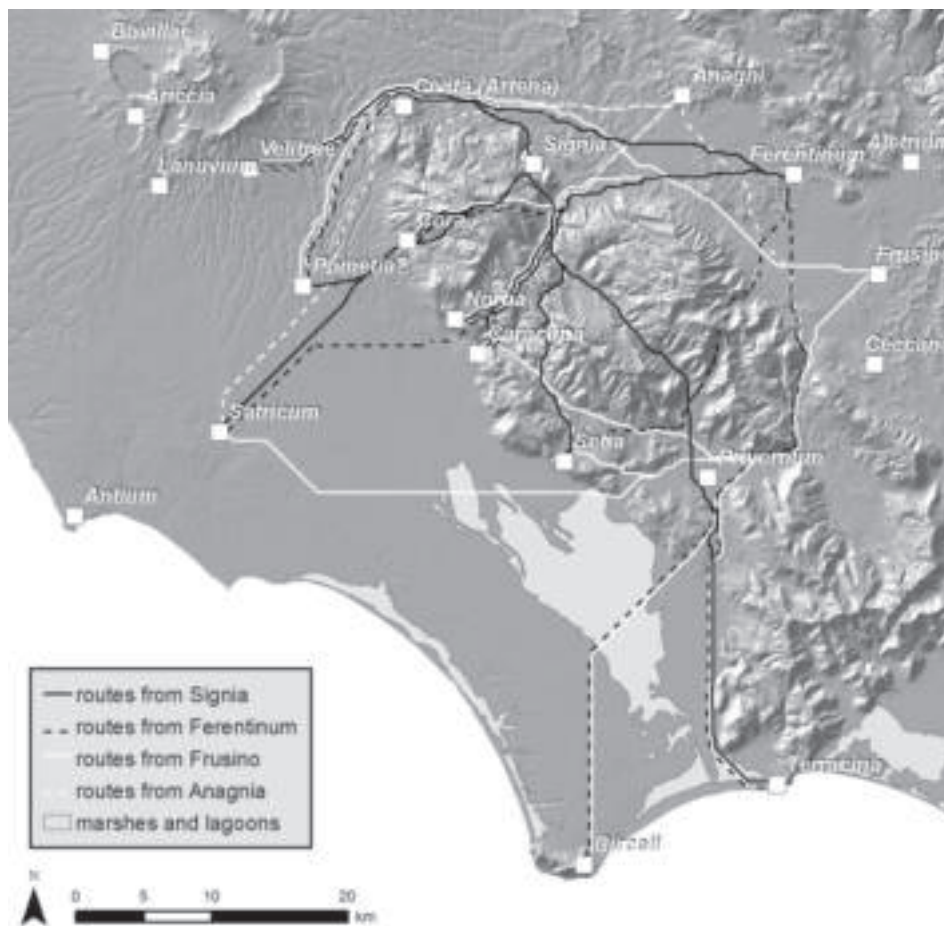


Fig. 2 Cost path analyses of routes connecting sites in the Sacco Valley with those in the Pontine Region (T. de Haas, GIA/RUG).

historical account of the struggles in the 150 years after its foundation.¹¹

From a geographical perspective, Norba would, in light of the above-mentioned incursions of Volsci, have been placed strategically. Cost path analyses show that there are several potential routes from the known sites in the Sacco Valley to the Pontine plain (Fig. 2).¹² The easiest of these bypass the Lepine Mountains either to the north-west, passing the site of Ardena, or to the south-east, past Privernum. However, both routes also had disadvantages: the northern route is long and would have passed several potentially hostile sites, including

Signia, Velitrae and Pometia, which are mentioned as foci of warfare in this period. The alternative route passing Privernum, a Volscian centre, would have been safer, but forced people to cross or bypass the Pontine marsh. Routes through the mountains would have passed through less directly controlled areas. As the cost path analysis indicates, the shortest route to reach the central part of the Pontine plain with its potential pastures and urban sites such as Satricum and Antium, would have exited near Norba. Norba was therefore strategically situated indeed, controlling both the Pontine plain and potential routes into the plain.

¹¹ Only in the mid-4th century is Norba again mentioned, as a loyal ally of Rome, despite being attacked by Volsci from Privernum in 341 and 330 BC. The town was presumably destroyed in the Social War, and after this Norba also disappears from the historical record. Considering the lack of historical references, it has been suggested that Norba was conquered by Volsci soon after its initial foundation in 492 BC, and that it was only refounded by the mid-4th century (Quilici Gigli 1996, 296). This suggestion remains highly speculative and the few archaeological traces on the site may suggest that the site shows continuity from the late Archaic period into the 4th century BC (see below).

¹² The cost paths have been created with the available tools in ArcGIS 10.0, using the slope model as the cost surface. We should stress here that the paths do not indicate in detail actual roads: in the analysis, slopes too steep to pass have not been excluded. Furthermore, other cost factors (for example, marshes and rivers) could have been included to approximate with more accuracy actual roads.

Polygonal masonry fortifications around Norba

Norba was certainly not the only fortified site in this area, as a range of strategically situated sites with polygonal masonry fortifications has been mapped in its vicinity. These sites vary in terms of size, lay-out, topographic position and presumably also function and chronology (Fig. 3).

Before Norba was founded, the primary settlement of the area was the site of Caracupa Valvisciolo. It is situated on the footslopes south-east of Norba, directly on the entrance of a valley that leads into the Lepine Mountains

towards Privernum to the east and towards Signia to the north. It was occupied from the Late Bronze Age onwards but had its prime in the 6th century BC, when the settlement covered a plateau of some 40 hectares.¹³ To the west, this plateau is bounded by a stream, across which burial grounds have been found. To the east, the slopes of the Monte Carbolino rise up steeply, and on these slopes there is an extensive system of polygonal masonry terraces.¹⁴ That these terraces had a defensive function is generally accepted: the terraces are too narrow and steep to serve as building terraces, and access to higher terraces is controlled through a system of gates.¹⁵ Thanks to the excavations conducted in the early 20th century, the construction of this defensive

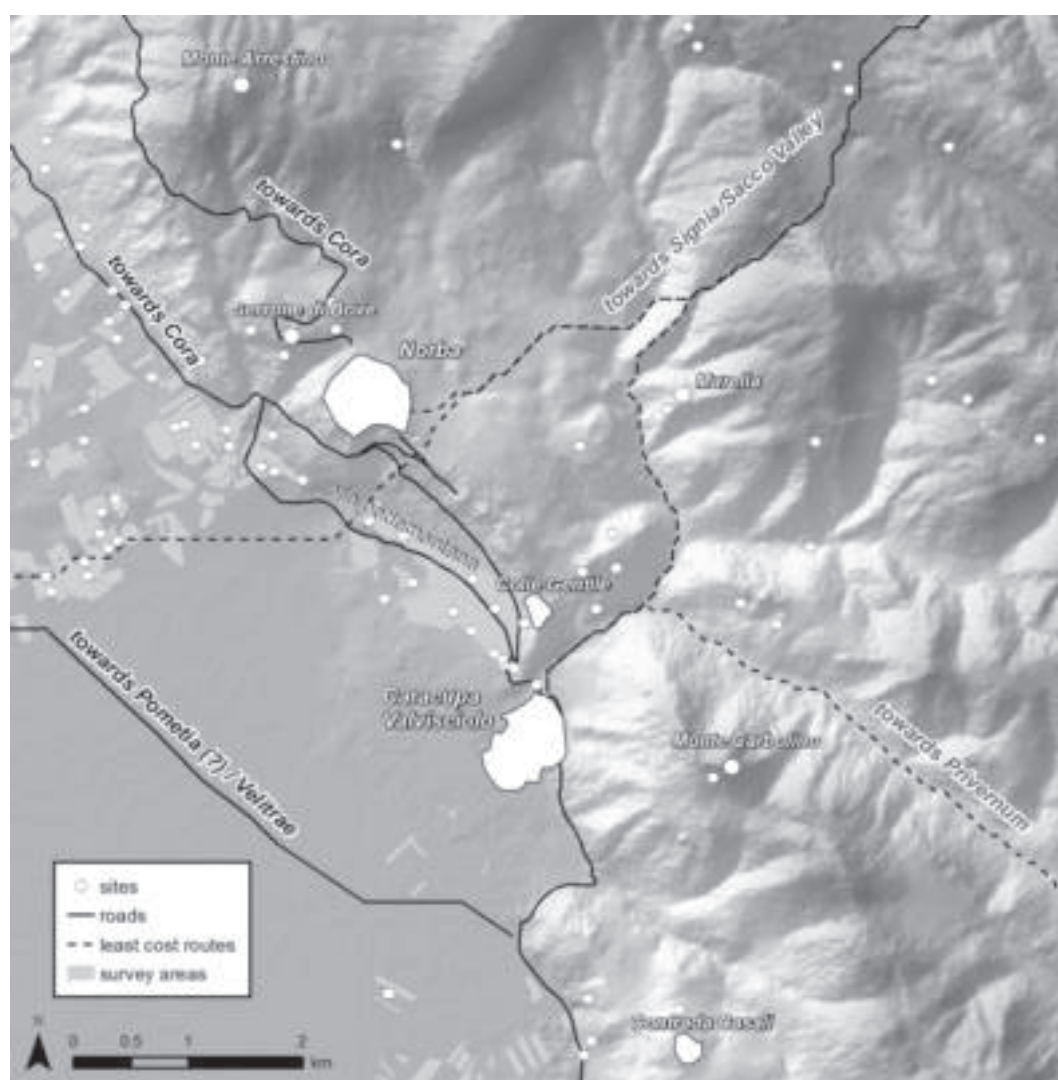


Fig. 3 Fortified sites around Norba (T. de Haas, GIA/RUG).

¹³ Attema & de Haas 2012.

¹⁴ Mengarelli & Paribeni 1909; Quilici & Quilici Gigli 1987.

¹⁵ Quilici & Quilici Gigli 1987, 266–9.

system can be placed in the later 7th or 6th century BC.¹⁶ Presumably, the terraces formed a safe haven for the population of the lower settlement and its surroundings in times of distress.

The construction of the *arx* of Caracupa Valvisciolo was not an isolated effort, as other fortifications in the area also date to the late Iron Age or Archaic period. One of these is the site of Colle Gentile, situated on a hill across the valley from Caracupa Valvisciolo. The site consists of a series of parallel terrace walls in 1st style polygonal masonry. Considering stylistic similarities in construction technique with the *arx* of Caracupa Valvisciolo and the associated pottery, Stefania Quilici Gigli places these walls in the 6th century BC as well.¹⁷ Considering the topographical position on steep and bare slopes and the lack of other architectural remains, the walls probably had a strategic function, which we will return to below.

A third strategic site, also situated close to Caracupa Valvisciolo, is that on the Monte Carbolino. It consists of a 1st style terrace wall enclosing an area of only 20 by 20 metres on the peak of this mountain. In its direct surroundings, remains of tombs and settlement debris (dated between the Final Bronze Age and the Archaic period) have been observed over an area of 0.6 hectares.¹⁸

While Caracupa Valvisciolo was the primary settlement in this period, there were several secondary settlements in the area which may have been fortified as well. The first of these is the site of Contrada Casali, situated south-east of Caracupa on a hill plateau surrounded by several rows of low 1st style polygonal masonry terrace walls. Stefania Quilici Gigli has suggested that these terrace walls had a defensive purpose.¹⁹ Considering their height of only c. 1 m, we doubt whether this was indeed the case, and suggest that they were solely intended as building terraces. Field surveys show that the approximately 5 ha large and totally overgrown site contains settlement debris at places where the subsoil

is disturbed. The site was occupied in the late Iron Age and Archaic period, but was subsequently abandoned in the early 5th century BC.²⁰

The site of Serrone di Bove, situated north-west of Norba, was already identified in the early 20th century.²¹ It consists of a 1st style polygonal masonry enclosure wall which delineates an area of 0.8 hectare. Within this enceinte, no architectural remains have been observed, but ceramics on the surface indicate that the site was settled in the 6th and 5th centuries BC. Presumably the walls pertain to this period as well.²²

Another small 1st style polygonal masonry enclosure has been recorded on the Monte Arrestino, a mountain top west of Norba. In terms of size and topographic position it is similar to that on Monte Carbolino, but in the case of Monte Arrestino no settlement debris has been observed, and it is not situated in proximity to any major site. The few ceramics observed on the site point at a date in the 6th or perhaps 5th century BC.²³

Besides these sites with 1st style polygonal masonry walls, there are two sites with more refined construction styles (Fig. 4). One of these is Norba itself, with walls enclosing an area of approximately 39 hectares. These walls have been constructed in different styles: To the south, west and north, 1st and 2nd style masonry is used, while to the east, particularly in the area of the main gate, refined 3rd style masonry occurs.²⁴ The use of different styles partly depends on topographic position, with stretches not easily visible from roads having less finely worked blocks. However, the different styles also relate to different construction phases. The 1st style sections would have been constructed in the second half of the 4th century BC, while the 3rd style sections, particularly those around the Porta Maggiore, would pertain to restorations of the 3rd century BC. The 2nd style sections could indicate an intermediate phase of reconstructions.²⁵

¹⁶ This date derives from stratigraphic observations: one terrace was constructed over an 8th/early 7th-century BC tomb (Mengarelli & Paribeni 1909, 260; Quilici & Quilici Gigli 1987, 270).

¹⁷ Quilici Gigli 1991.

¹⁸ Savignoni & Mengarelli 1901, 554–5; van Leusen *et al.* 2009/2010, 395.

¹⁹ Quilici Gigli 2004b, 269–71.

²⁰ Attema 1991; Attema 1993, 139–55.

²¹ Savignoni & Mengarelli 1901, 554.

²² Savignoni & Mengarelli 1901, 517–21; Quilici Gigli 1988; 2004b, 267–8.

²³ Quilici Gigli 2004b, 276.

²⁴ Savignoni & Mengarelli 1901; Quilici & Quilici Gigli 1988; 2001.

²⁵ Quilici & Quilici Gigli 2001. Based on recent excavations, De Spagnolis has suggested that in the fortifications of the minor acropolis and the *porta maggiore*, there are sections in the 3rd style dating to the mid-4th century BC, while a second set of (superimposed) 3rd style walls would pertain to a 3rd-century BC phase (De Spagnolis 2011, 465).



Fig. 4 Polygonal masonry fortifications at Norba (A/C) and Murella (B/D) (T. de Haas, GIA/RUG).

A final site with polygonal masonry defences is that of Murella, a protruding hill spur somewhat further away from the edge of the Lepine Mountains. This site has over the last few years been investigated by members of the Pontine Region Project.²⁶ It consists of a polygonal masonry wall that encloses an area of at least two hectares on three sides, presumably with an entrance on the north-western side. To the west, a transversal wall encloses the spur. The presence of tile, dolium and other types of ceramics suggests that this site was also permanently settled, at least in the 3rd to 1st centuries BC. Different techniques are used: the frontal west side of the enclosure is constructed in the crude 1st style, while a structure on the north-east side, probably a tower or small bastion that controls the entrance, is erected in the 3rd style. Although the construction date of the polygonal masonry enclosure remains to be established,

considering the use of a more refined technique, we suggest these walls (like those of Norba) date to the 4th or 3rd century BC (Fig. 4).

Contextualizing the fortifications in the Norba area

Above we already hinted at the different topography, layout, size and function of the defended sites around Norba. We now come to a contextual treatment of the defences. For this analysis we use the topographical and typological information discussed above in combination with viewshed analyses, in order to see to what extent these hint at complementarity or coherence of the fortifications.²⁷

²⁶ Van Leusen *et al.* 2003/2004, 337–8; Van Leusen *et al.* 2009/2010, 342; De Haas 2011, 235–7.

²⁷ The viewshed analyses derive from previous analyses by the first author (De Haas 2011, 242–51) but with some modifications: the sites of Serrone di Bove and Monte Carbolino were erroneously included as mid-Republican in that analysis, while there Murella was still considered as possibly occupied in the Archaic period – for which we now think there is insufficient evidence.

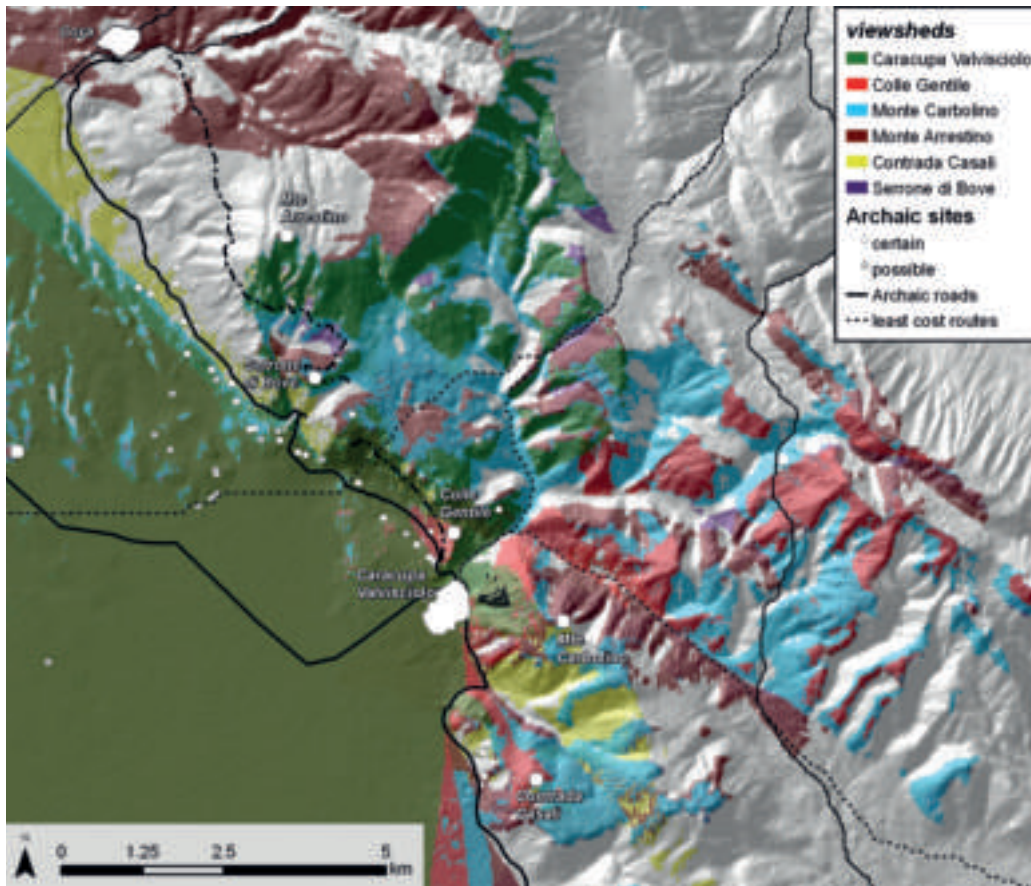


Fig. 5 Superimposed viewsheds of Archaic (6th century BC) defended sites (T. de Haas, GIA/RUG).

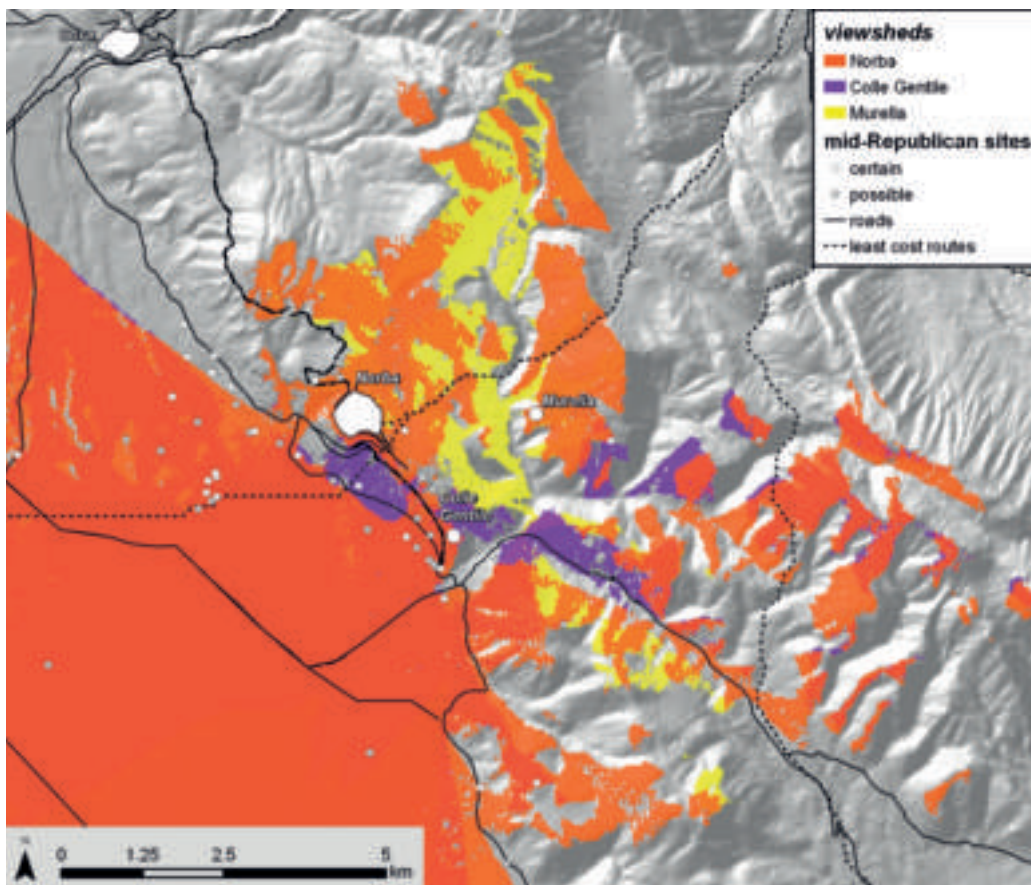


Fig. 6 Superimposed viewsheds of mid-Republican (later 4th/ 3rd century BC) defended sites (T. de Haas, GIA/RUG).

Figure 5 presents the combined viewsheds of the defended sites of the Archaic period.²⁸ Green areas are in direct sight from the settlement and/or defences of Caracupa Valvisciolo and include a large part of the Pontine plain, sections of the major roads and the entrance of the valley to its north. Arable land west of the settlement was visually dominated by the defences, and field surveys have established the presence of small farms of the Archaic period in this area.²⁹ The sites at Monte Arrestino, Serrone di Bove, Murella and parts of the plateau of Norba were visible from Caracupa Valvisciolo. Contrada Casali was visible from the settlement, but not from the defences.

The other defended sites supplement Caracupa Valvisciolo in terms of visual control. Colle Gentile, situated directly across the valley from Caracupa, controlled the access to and exit from the mountains in tandem with Caracupa Valvisciolo. The views of these sites complement each other, Colle Gentile overlooking the route towards Privernum. Equally, Colle Gentile controlled a section of road along the foot of the mountains where a second road led up the slopes of the Lepine Mountains. This crossroads was not visible from Caracupa Valvisciolo.

Finally, Colle Gentile may also have functioned as a visual link with the small site on the Monte Carbolino, which is not directly visible from Caracupa Valvisciolo. It occupies one of the highest peaks of the area and provided visual control over parts of the interior Lepine Mountains, including sections of all valleys and confluences of valleys. Considering its visual link with Colle Gentile it probably served as a permanently settled look-out post to control the routes that approached Caracupa Valvisciolo from the mountains. It also had a good view over all other defended sites in the area.

A similar function may be suggested for the enclosure on the Monte Arrestino: although it is positioned below the highest peak of this mountain – and its view towards the north and west is therefore limited – it does provide

additional views into the uplands to its east and north-east. It would also have provided a visual link to the site of Cora, the nearest presumed Archaic centre. Monte Arrestino is within sight of Monte Carbolino and the arx of Caracupa Valvisciolo.

It is doubtful whether the second largest Archaic settlement of the area, Contrada Casali, was part of a wider strategic system, since it controls only a small area not in sight from Caracupa Valvisciolo, Monte Carbolino or Colle Gentile. It only has an additional view of the access routes towards the site itself and the plateau to its south-east. These areas are not part of any major route through the mountains, but represent its potential agricultural land. As suggested above, we doubt whether the terraces of Contrada Casali had a defensive purpose, but if they did they would provide the local community with protection in times of insecurity.

The site of Serrone di Bove had a similarly limited viewshed: its view over the Pontine plain is blocked by a rock outcrop to its south, and it only controlled limited parts of the Lepine Mountains to its north. It would, however, have controlled sections of a road that along the edge of the Lepine Mountains led from Cora towards the south-east.

In conclusion, our analysis shows that the fortifications of Caracupa Valvisciolo were intended to provide a refuge for the population of the lower settlement, but that they also controlled the exit of the routes from the mountains, the *via pedemontana* and the agricultural land to the west of the site. It was not well situated to guard or observe the valleys in the interior Lepine Mountains, but the sites at Colle Gentile, Monte Carbolino, and Monte Arrestino provided additional eyes on these routes. They were therefore part of a single system of control.³⁰

Archaeological research has shown that the above-described system centring on the settlement of Caracupa Valvisciolo changed after the 6th century BC. Not only

²⁸ The viewsheds have been created in ArcGIS 9.1 using a DEM with a resolution of 30 m. They are based on polylines tracking the outer limit (the defensive walls) of each site as well as the highest contour line of each site. Allowing for a modest upper structure on the defensive walls, the vertical offset was set at three metres above ground level. The viewsheds are displayed on top of each other with that of the primary settlement, Caracupa Valvisciolo on top, thus showing the complementarity of other sites in relation to it. The same has been done in Fig. 6 with the viewshed of Norba on top.

²⁹ Van Leusen *et al.* 2003/2004; De Haas 2011, 238. The distribution of rural sites as displayed in Fig. 5 is biased by variations in research intensity: only the footslopes of the Lepine Mountains have been investigated intensively (areas indicated in grey in Fig. 5), and consequently in those areas more sites are known (cf. de Haas 2011, 240).

³⁰ Another site that may have had a controlling function is that of Colle Maria Giangola, a hill top north-east of Colle Gentile. Although it has so far not yielded traces of defensive walls, it is situated on the point where the la Mola valley splits into two branches that go north-west and east respectively. It had a view over the valley to the east, which is not within sight from any of the other defended sites (De Haas 2011, 243–4).

the centre of Caracupa Valvisciolo itself, but also the secondary settlement at Contrada Casali were abandoned in the early 5th century. Presumably, the look-out posts at the Monte Arrestino and Monte Carbolino were no longer used after the 5th century BC either.

It is impossible to say at the moment whether Norba immediately took over the role of Caracupa Valvisciolo as the central settlement of the area. However, from the late 6th or early 5th century BC it certainly gained importance and must have housed a sizeable settlement, as is clear from the presence of three 5th-century sanctuaries on the site.³¹ Presumably, the sanctuaries (and the associated settlement?) were continuously occupied into the second half of the 4th century BC, when Norba acquired urban features, including its impressive polygonal masonry defences. In terms of urban layout, with the entire settlement plateau being defended, Norba differed fundamentally from Caracupa Valvisciolo.

The defensive system of the area was also very different from the Archaic one (Fig. 6). Norba had an extensive view of the Pontine plain, but unlike Caracupa Valvisciolo also of several potential routes through the Lepine Mountains. The look-out posts on the mountain tops were apparently no longer needed to control the approaches to the site. Colle Gentile, the single defended site that shows continuity from the Archaic period into the later 4th century, controlled stretches of road along the foot of the mountains and through the mountains towards Privernum that were not visible from Norba itself.³² Equally, the site of Murella had extensive views over upland areas not visible from Norba. However, these areas include only a limited part of a potential route, and its position 'opposite' Norba with its entrance on the unprotected north-eastern side, could also suggest that Murella is not part of the same system of control, but rather opposed it.³³

Conclusion

In this paper, we have argued that the defences of the Roman colony of Norba cannot be understood in light of an anachronistic and condensed historical account, in this case the foundation date of this colony. Rather, the archaeological and geographical context of the site

show that the wider area was of strategic importance as a passage into the Pontine region, and during the Iron Age and Archaic period (so already before the foundation of Norba) a system of control had developed. This system consisted of a number of fortified sites that in combination guarded all traffic moving in and out of the plain passing the settlement of Caracupa Valvisciolo, which in itself was not well defended.

After the destruction of this site in the late 6th or early 5th century BC, written sources suggest that a long period of instability followed. A general impoverishment of the material culture and a decline in rural settlement in many parts of the Pontine region surely reflect this unstable social context.³⁴ The foundation of Norba was one event taking place in this context, and although it cannot be identified directly in the archaeological record, the site certainly grew in importance in the 5th century. Its strategic position must have been an important factor in its growth and arguably the main reason for choosing this location to establish a colony.

Although written sources suggest that central Italy was all but relieved from military action in the late 4th century BC, Rome's increased grip on the region provided the necessary preconditions for the reorganization of the local and regional system of control, which had surely been brought about by this time. While some elements of the older local system of control were incorporated, the colonies along the Lepine Mountains (Cora, Norba, Setia, Terracina), protected by polygonal masonry enceintes, were situated in positions that dominated both the Pontine plain and routes from the interior. At this time, these colonies had also become modest urban settlements, while rural areas around them witnessed increasingly intensive exploitation. Investments in infrastructure (most importantly in the construction of the *via Appia*) boosted the development of the regional economy.³⁵

On a broader level, our case study shows the importance of studying the geographic context of ancient fortifications, as opposed to studying them as unique objects. On the one hand, GIS software provides important tools to better understand the strategic value of fortified sites, and the complementarity of multiple fortified sites in a given landscape. On the other hand, landscape archaeological

³¹ De Haas 2011, 246–7 with references.

³² Although no mid-Republican remains have been recorded at Serrone di Bove, the site could have complemented Norba's view over the road towards Cora.

³³ Cf. Van Leusen *et al.* 2009/2010, 342.

³⁴ De Haas 2011, 291–4; Attema *et al.* 2011, 57–9.

³⁵ De Haas 2011, 294–6; De Haas & Tol forthcoming.

data allows us to analyse the long-term settlement developments within which fortifications were erected and systems of fortifications were created and modified. Such an integrated approach will surely advance our understanding of Rome's expansion and the diverse spatial and chronological contexts in which it took place.

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RÖMISCH-ITALISCHE STADTMAUERN DER MITTLEREN REPUBLIK: FUNKTION UND SEMANTIK: EINE QUELLENKRITISCHE UNTERSUCHUNG ZU LIVIUS

Christian Winkle

Zusammenfassung

Der Beitrag beschäftigt sich mit dem Quellenwert und dem historischen Kontext der Erwähnungen von Stadtmauern im Werk des T. Livius. Der chronologische Schwerpunkt liegt auf der 3. Dekade des livianischen Werkes. Untersucht werden die Einbettung von Mauern und Befestigungsanlagen in historische Zusammenhänge (Belagerung etc.), die Funktionen von Fortifikationen (etwa in militärischer oder urbanistischer Hinsicht) und ihre Einbettung in spezifische Bedeutungsfelder, also ihre semantische Funktion. Verdeutlicht wird, dass Mauern, bedingt durch die narrative Struktur des Werkes, die rhetorische Durchgestaltung zahlreicher Passagen sowie die zahlreichen exemplarischen Erzählungen mit den starken Wertungen des Autors, auch im Werk des Livius durchaus wechselnde Bedeutungen annehmen konnten. Daraus ergibt sich, dass zwar der Quellenwert von Passagen, in denen Mauern Erwähnung finden, für die Rekonstruktion der betreffenden Bauwerke oder Befestigungsanlagen in Teilen gering zu veranschlagen ist, jedoch ein großer Teil der Berichte des Livius zu militärischen Ereignissen oder auch zu fortifikatorischen Maßnahmen ab der 3. Dekade – abhängig von Quellen des Livius – eine gewisse Glaubwürdigkeit beanspruchen kann.

Stadtmauern und Befestigungsanlagen waren für die römischen Städte des 3. und 2. Jh. zur Bewahrung ihrer Existenz und Identität konstitutiv.¹ Für Koloniestädte wie Cosa, Norba, Signia oder Cora oder die latinischen Städte wie Gaii² – die Liste ließe sich beliebig erweitern – ist dies auch archäologisch nachzuweisen. Die Mauern

von Städten wie z. B. Norba oder Signia sind sogar vielfach sowohl für antike Quellen wie auch neuzeitliche Historiographen, Literaten und Reisende Symbol für die Bedeutung jener Kolonien als, wie Cicero es ausdrückt, *propugnacula imperii*.³ Jenseits der archäologischen Quellen, der erhaltenen oder teilweise erhaltenen

¹ Zu den italischen Stadtmauern s. Miller 1995.

² Vgl. etwa den Beitrag von Sophie Helas in diesem Band und das Projekt zur Stadtmauer Gaiis (<http://www.ai.uni-bonn.de/lehre-und-forschung/projekt-gaii-latium-1>) oder etwa Quilici & Quilici Gigli 2000. Einen wesentlichen Beitrag zu den Datierungsfragen des mittelitalischen Polygonalmauerwerks leistet auch Tombrägel 2012, 22–32.

³ Cic. *leg. agr.* 2.73, vgl. Cic. *Phil.* 5.27; Cic. *Font.* 13; zum Begriff *propugnacula* s. Rebuffat 1984; auch bei Livius finden sich genügend Beispiele für die Schutzfunktion der römischen Kolonien (u. a. 22.14.4–5); zur römischen Kolonisation in der römischen Historiographie s. Patterson 2006. Ein Aufsatz zu den Kolonien in der römischen Historiographie ist in Vorbereitung (Christian Winkle).

Stadtmauern, erwähnen die schriftlichen Quellen, vor allem Livius und Polybios, immer wieder die Mauern von Siedlungen und Städten der Mittleren Republik im italischen Raum. Diese Erwähnungen bei den genannten Historikern können einerseits als Quelle für die Existenz solcher Mauern oder Befestigungsanlagen gewertet werden, andererseits als Beleg für deren Einbettung in einen historischen Zusammenhang (Belagerung etc.), für ihre Funktionen (etwa in militärischer oder urbanistischer Hinsicht) oder auch als Beleg für ein spezifisches Bedeutungsfeld, also für deren semantische Funktion. Doch ist die Aussagekraft bzw. der Quellenwert dieser historiographischen Erwähnungen für die Untersuchung archäologisch nachweisbarer Siedlungen und ihrer Mauern in starkem Maße von den jeweiligen Vorlagen und der historiographischen Arbeitsweise der entsprechenden Autoren abhängig. Der Wert und die Nutzbarkeit der entsprechenden historiographischen Zeugnisse für Fragen der Datierung oder Interpretation von Mauern kann nur beantwortet werden, wenn die betreffenden Quellenstellen einer systematischen Sichtung unterzogen wurden.⁴

Aus diesem Grund beschäftigt sich der vorliegende Beitrag mit dem Quellenwert, dem historischen Kontext, der Funktion und der Semantik der von Livius erwähnten Stadtmauern vor allem im italischen Raum, wobei der Schwerpunkt der Untersuchung auf der dritten Dekade des Livius liegt.⁵ Dabei ist neben Begriffen wie etwa *murus*, *moenia*, *propugnacula*, die für Stadtmauern oder Befestigungsanlagen⁶ stehen, einschließlich der Bestandteile von Mauern wie *porta* und *turris* oder der Wortfelder, die etwa mit der Erstürmung oder Belagerung von Städten⁷ zu tun haben, besonders der historische Kontext solcher Erwähnungen von Stadtmauern von Interesse und daraus resultierend wird nach der Funktion

und nach dem Bedeutungsspektrum einerseits für die geschilderte Zeit, andererseits für die Zeit des Autors gefragt.

Da unser Wissen über das Leben des Historikers aus Padua leider ausgesprochen dürftig ist,⁸ lassen sich streng genommen zu seinen Erfahrungen und seinen Wissensbeständen in militärischen oder fortifikatorischen Dingen keinerlei Aussagen machen. Lediglich sein Werk bietet die Möglichkeit über die Analyse z. B. der zahlreichen geschilderten Schlachten und Belagerungen auf die Kenntnisse des Livius in militärischen Dingen zurückzuschließen. Patrick G. Walsh urteilt in seinem nach wie vor wertvollen Band zu Livius, dem Historiker fehle das militärische Fachwissen oder die Kenntnisse um Geographie und daraus resultierend sei der Quellenwert geographischer oder militärischer Angaben im livianischen Werk ausgesprochen problematisch zu bewerten.⁹ Doch scheint diese Einschätzung vor dem Hintergrund der wenigen Angaben zum Leben des Livius etwas zu einfach.¹⁰ Zweifellos ist Livius jener Richtung der hellenistischen Geschichtsschreibung zuzuordnen, die man als rhetorische und tragische Geschichtsschreibung bezeichnet. Damit steht außer Frage, dass für Livius die dramatische und rhetorische Gestaltung des Stoffes, die Anschaulichkeit, Verständlichkeit (Plausibilität) oder die Beschreibung emotionaler Zustände und der psychischen Verfassung seiner Akteure im Vordergrund des Interesses steht.¹¹ Auch ist die mehr oder weniger starke Umgestaltung der Vorlagen bei Livius immer wieder gut nachzuvollziehen.¹² Doch sollten diese Hinweise nur zum kritischen Umgang mit Livius und dessen historiographischer Arbeitsweise und Methodik auffordern, jedoch nicht darüber hinwegtäuschen, dass zumindest einem großen Teil der Berichte des Livius zu militärischen Ereignissen oder auch zu Mauern und

⁴ Frederiksen 2011, 20–38.

⁵ Freilich gibt es neuere Studien zu Belagerungen (Roth 2006), Schlachten (Koon 2010; Levene 2010, 261–300) oder auch Topographie (Horsfall 1982; Horsfall 1985) bei Livius, aber eine Beschäftigung mit Mauern bzw. Befestigungsanlagen bei Livius existiert noch nicht.

⁶ Während *moenia* meist für die gesamte Stadtmauer und häufig auch synonym für die Stadt Verwendung findet, bezeichnet *murus* allgemein Mauern, so eben auch die Stadtmauer.

⁷ Vgl. hierzu z. B. Roth 2006, 55–8, der u. a. auf die auch bei Livius meist sorgfältige Trennung zwischen der Einschließung oder Blockade einer Stadt (*obsidio*) und deren Bestürmung oder mit Angriffen verbundenen Belagerung (*oppugnatio*) unterscheidet (s. Roth 2006, 65 Anm. 76).

⁸ Walsh 1961, 1; Chaplin & Kraus 2009, 5–8.

⁹ Walsh 1961, 153–63 und 195–204. Bezeichnend ist nach wie vor die folgende Einschätzung: „Livy’s geographical vagueness is a weakness; still more crippling is his ignorance of military matters.“ (Walsh 1961, 157); vgl. Walsh 1958; ähnlich Horsfall 1982 und Horsfall 1985.

¹⁰ Allein vor dem Hintergrund der livianischen Beschreibungen von militärischen Ereignissen auf seine fehlende militärische Erfahrung zu schließen, wäre – so Kraus 1994, 1 Anm. 1 – naiv. Das Bild eines ignoranten Schreibtischgelehrten, welches die ältere Forschung von Livius zeichnet, haben zuletzt in Bezug auf militärische Fragen Koon 2010, 23–6 und Roth 2006 relativiert. Dass sich das etwas zu simple Urteil zur fehlenden militärischen Praxis des Livius hartnäckig hält, belegt zuletzt Halfmann 2013, 51, dem aber bei seinem dezidierten Urteil zur Verfälschung der römischen Heeresbildung bei Livius (Halfmann 2013, 56–7) uneingeschränkt zugestimmt werden kann.

¹¹ Burck 1977b; Walsh 1961, 181–204; McDonald 1957.

¹² So z. B. Levene 2010, 132–5 zu Coelius Antipater.

fortifikatorischen Maßnahmen – wenigstens ab der dritten Dekade des Werkes – eine historische Realität zugrunde liegt.¹³

Bei Livius finden sich zahlreiche Passagen, in denen Mauern und Befestigungsanlagen zur Erwähnung kommen.¹⁴ Der großen Zahl der Stellen, in denen Livius mit Termini wie *murus* oder *moenia* Stadtmauern beschreibt, soll zuerst eine Quellenpassage gegenübergestellt werden, die sich mit dem Mauerbau und deren Techniken beschäftigt. Sie bietet die Möglichkeit, sich mit der Frage nach den Wissensbeständen des Autors oder seiner Vorlagen zur technischen Seite des Mauerbaus auseinanderzusetzen. Von Bedeutung ist dies vor dem Hintergrund der hier erörterten Frage nach dem Quellenwert.

Ein für die skizzierte Thematik sicherlich zentrales Beispiel ist die Belagerung Sagunts – freilich ein Beispiel aus dem spanischen Raum – im Jahr 219 durch Hannibal.¹⁵ Während dieser Belagerung wurde nach Aussage des Livius eine Vielzahl von poliorketischen Mitteln seitens der Karthager eingesetzt, um die Stadt zu erobern. Ein erster Erfolg ist der Einsturz eines Teilstückes der Stadtmauer.¹⁶ Allerdings gelingt es den Saguntinern, die karthagischen Angreifer zurückzuschlagen und die entstandene Lücke erneut mit einer Mauer zu schließen.¹⁷ Im weiteren

Verlauf schildert Livius (21.11.8–9), dass sich nach einer Kampfpause für die Truppen Hannibals durch den Einsatz eines mobilen Belagerungsturms (*turris mobilis*¹⁸) die Möglichkeit für eine Einheit von 500 Afrern¹⁹ ergab, bis unmittelbar an die Mauern vorzurücken.²⁰ Er fährt fort: *nec erat difficile opus, quod caementa non calce durata erant, sed interlita luto structurae antiquae genere.*²¹ Die Mauern seien nach alter Bauart aus Bruchsteinen (*caementum*²²) und lediglich mit Lehm (*lutum*) verfugt und nicht wie in der Zeit des Livius mit Kalkmörtel (*calx*). Dies habe es den Afrern ohne großen Aufwand ermöglicht, einen Teil der Mauer mit Brecheisen (*dolabra*) zum Einsturz zu bringen und so eine größere Bresche zu schlagen.²³ Eine solch detaillierte Beschreibung dieser Vorgänge findet sich allein bei Livius. Lediglich Cassius Dio (bei Zonaras 8.21.11), dessen Beschreibung der Belagerung mit der des Livius weitgehend übereinstimmt, erwähnt den Einsatz eines Belagerungsturms sowie den Umstand, dass sich die Angreifer unter der Mauer durchgegraben hätten.²⁴ Mithin stellt sich die Frage, ob Livius dem Leser an dieser Stelle sein eigenes Wissen um den Mauerbau darbietet oder ob er für diese Schilderung auf eine Quellenvorlage zurückgreift und diese ausschreibt.²⁵ Da die genaue Beschreibung, wie die Mauer zum Einsturz gebracht wird, sich nur bei Livius findet, mithin Polybios als mögliche Quellenvorlage ausscheidet,²⁶ und wir etwa

¹³ Roth 2006, 49: „It may be that a focus on rhetorical elements have led some commentators to miss the fact that Livy's narratives reflect underlying realities of siege warfare“.

¹⁴ Allein *moenia* findet sich fast 300-mal und *murus* über 350-mal im Werk des Livius.

¹⁵ Zur Belagerung Sagunts: Livy 21.7.4–9.2; 21.11.3–15.3; vgl. Polyb. 3.17; Diod. Sic. 25.15; App. *Hisp.* 10.39–12.46; Dio Cass./Zonar. 8.21.4–12. Vgl. Seibert 1993, 136–9; Urban 1966, 188–92; Moret 1996, 242–55.

¹⁶ Livy 21.8.5–9.2; vgl. Sil. *Pun.* 1.365–75; Dio Cass./Zonar. 8.21.10.

¹⁷ Livy 21.11.5; vgl. Sil. *Pun.* 1.556–63; 576–80; Dio Cass./Zonar. 8.21.10.

¹⁸ Vgl. Dio Cass./Zonar. 8.21.11. Gemeint ist wohl eine Helepole (ἑλέπολις), vgl. Lendle 1983, 36–70.

¹⁹ Es handelt sich wohl um eine libysche Einheit oder zumindest eine Einheit desjenigen Bevölkerungsteils, der Karthago zur Stellung von Kontingenten verpflichtet war (Huß 1985, 468–71), vgl. Livy 21.22.2: *peditum Afrorum*.

²⁰ Freilich geht aus dem Text des Livius nicht hervor, ob es sich um die zuvor neu errichtete Mauer handelt oder einen anderen Mauerabschnitt.

²¹ Livy 21.11.8: „Sie hatten keine schwere Arbeit; denn die Steine waren nicht mit Mörtel verfestigt, sondern nach alter Bauart nur mit Lehm verfugt.“

²² Das hier für Bruchsteine bzw. Bruchsteinmauerwerk verwendete Wort *caementa/caementum* ist bei Livius nur ein weiteres Mal in 36.22.11 belegt.

²³ Livius schildert (s. o.) in 21.8.5, wie die Belagerer einen Teil der Mauern zum Einsturz bringen, es danach aber den Saguntinern gelingt, erneut eine Mauer zu errichten (Livy 21.11.5). Dass es sich bei der hier beschriebenen mit Lehm verfugten Mauer um die neu und in aller Eile errichtete handelt, scheint plausibel (vgl. u. a. Moret 1996, 245–7). Doch ist der Text hier keineswegs eindeutig. Sieglin 1883, 356–8 nimmt an, dass bei Livius an dieser Stelle eine Doublette vorliegt und der bereits in Livy 21.8.5–9.2 beschriebene Mauerdurchbruch hier aufgrund eines Missverständnisses des Livius bzw. einer falschen Interpretation der Vorlagen erneut geschildert wird.

²⁴ Ähnlich ist die Beschreibung des Sil. *Pun.* 1.365–7, der die von Herkules erbauten Mauern mit großem Getöse zusammenbrechen lässt (1.368–70).

²⁵ Welche Quellen Livius benutzt hat und wie er mit seinen Vorlagen umging, sind viel diskutierte Fragen (s. hierzu Levene 2010, 126–63; Oakley 2009). Klotz 1940–41, 123 und Burck 1950, 63 sehen in der Schilderung der Einnahme Sagunts den auf dem Augenzeugenbericht des Silenos von Kaleakte (*FGrH* 175) fußenden Bericht des Coelius Antipater. Coelius hat Silenos nachweislich benutzt (*FGrH* 175 T 2). Silenos begleitete Hannibal über weite Strecken des 2. Punischen Krieges (vgl. Nep. *Hann.* 13.3).

²⁶ Die Beschreibung des Polybios (3.17) ist ausgesprochen kurz und erwähnt kaum Details zur Belagerung.

Coelius Antipater, den Livius im 21. Buch nachweislich benutzt hat, als Vorlage vermuten können,²⁷ wäre eine Eigenschöpfung des Livius möglich, zumal Livius hier, wie an anderen Stellen auch, eigene Erklärungen für den Leser zu formulieren scheint und seine Vorlagen umgestaltet,²⁸ was aus der wohl von ihm stammenden Bewertung der Stadtmauern Sagunts als altertümlich (*structura antiqua*) abgeleitet werden könnte. Die von Livius ebenfalls bei der Belagerung von Sagunt im Detail geschilderte *phalarica*²⁹ ist ein Beispiel für eine solche Erklärung für die Leser bzw. einen Einschub durch Livius oder auch eine seiner Vorlagen. Archäologisch lässt sich die von Livius beschriebene, dem römischen *pilum* ähnliche Waffe zumindest im iberischen Raum nicht nachweisen.³⁰ Es liegt demnach nahe, dass Livius mit der Beschreibung der im etruskisch-italischen Raum bekannten *phalarica* seine Beschreibung der Belagerung möglichst anschaulich und detailliert gestalten will, wir es aber keinesfalls mit einer zutreffenden Beschreibung der von den Verteidigern Sagunts eingesetzten Wurfwanne zu tun haben. Prinzipiell ist der Schilderung der Belagerung Sagunts durch Livius aber, trotz mancher literarischer Überformungen durch den Autor, die Glaubwürdigkeit nicht abzuspochen.³¹ Der Auszug 21.11.8 zeigt einerseits, dass Livius den Kalkmörtel seiner eigenen Zeit zuordnet und sich nicht darüber im Klaren ist, dass Kalkmörtel bereits weitaus früher Verwendung beim Mauerbau fand.³² Andererseits verweist die Verwendung des Lehms durch die Saguntiner in der Deutung des Livius auf eine alte, besser gesagt veraltete Bauweise und soll damit für den Leser des livianischen

Werkes einen deutlichen Unterschied zwischen den kulturellen und technischen Errungenschaften Roms auf der einen und den Saguntinern auf der anderen Seite markieren. Auch wenn die von Livius erwähnte iberische Technik des Mauerbaus exakt diejenige ist, die auch archäologisch für die Zeit des 2. Punischen Krieges auf der iberischen Halbinsel nachweisbar ist und weit verbreitet war,³³ und die Tatsache, dass andere Autoren wie Polybios die besprochene Episode nicht erwähnen,³⁴ kein ausreichendes Argument ist, um sie als Erfindung des Livius zu bezeichnen, bleiben starke Zweifel an der Authentizität der hier im Mittelpunkt stehenden Beschreibung des Mauerbaus durch die Saguntiner. Die livianische Erzählung bleibt in diesem Punkt letztlich problematisch³⁵ und es scheint plausibler, dass Livius eine eigene Erklärung für den schnellen Einsturz der Mauer geben und den kulturellen Unterschied zwischen den Verteidigern Sagunts auf der einen und den Karthagern auf der anderen Seite bzw. den Römern der augusteischen Zeit hervorheben will. Die beiden detaillierten Schilderungen der saguntinischen Mauer und der *phalarica* könnten jedoch durchaus auch bereits Einschübe der Vorlagen des Livius sein und so muss die Frage nach den Wissensbeständen des Autors in Bezug auf Mauerbau und Mauertechniken offenbleiben.

Im Sommer des Jahres 218 v. Chr. kommt es, während Hannibal mit seinem Heer bereits zu seinem Zug über die Pyrenäen und das südliche Gallien nach Italien aufgebrochen ist, in Oberitalien zu einem Aufstand der Bojer und Insubrer.³⁶ Die Angriffe der keltischen

²⁷ Coelius Antipater wird von Livius im 21. Buch mehrfach genannt (21.38.6; 21.46.10; 21.47.4) und ist für die Bücher zum zweiten römisch-karthagischen Krieg der am häufigsten zitierte Autor.

²⁸ Vgl. zu dem nachweisbaren Bemühen des Livius, dem Leser Erklärungen für Sachverhalte zu geben, die in seinen Quellen nicht gegeben werden, Koon 2010, 23–6. Dass diese Erklärungen immer wieder auch den Mangel an Kenntnissen bei Livius offenlegen und dies besonders bei militärischen oder fortifikatorischen Sachverhalten, bleibt unbestritten (vgl. Roth 2006, 55). Auch ist die mehr oder weniger starke Umgestaltung der Vorlagen bei Livius immer wieder gut nachzuvollziehen (so z. B. Levene 2010, 132–5 zu Coelius Antipater). Doch ist das vernichtende Urteil von Walsh 1961, 157 inzwischen kaum mehr haltbar.

²⁹ Livy 21.8.10–2 (vgl. die Kommentare von Walsh 2000, 137 und Händl-Sagawe 1995, 72); vgl. Sil. Pun. 1.350–64. Die *phalarica* wird u. a. auch noch bei Veg. Mil. 4.18 und Livy 34.14.11 erwähnt.

³⁰ Moret 1996, 260.

³¹ Zur prinzipiellen Glaubwürdigkeit: Händl-Sagawe 1995, 69 mit weiterer Literatur. Die Funktion der Schilderung der Belagerung Sagunts für das livianische Werk und speziell für die dritte Dekade und damit die rhetorische und inhaltliche Durchgestaltung betont auch Edgeworth 1989.

³² Vgl. Vit. 2.5; Cat. Agr. 18.7.

³³ Moret 1996, 245: „Ces lignes définissent avec une parfaite exactitude la technique de construction la plus usitée chez les Ibères, à base de moellons et de terre; elles soulignent en même temps son caractère archaïque aux yeux d'un Romain ou d'un Carthaginois de la fin du III^e siècle“. Bei Moret 1996, 242–8 finden sich auch weitere Ausführungen zum archäologischen Befund. Doch trotz der zutreffenden Bewertung Morets muss festgehalten werden, dass die beschriebene Bauweise auch für andere Mittelmeerregionen nachweisbar ist und in späteren Jahrhunderten Anwendung fand.

³⁴ Dem Verhältnis der Werke des Livius und Polybios zueinander widmete sich zuletzt Halfmann 2013, besonders instruktiv zur Abhängigkeit des Livius von Polybios Halfmann 2013, 52–3.

³⁵ Zu den nach wie vor bestehenden Problemen Seibert 1993, 136–9.

³⁶ Livy 21.25–6; Polyb. 3.40.2–41.1; App. Hann. 5.17–9; 8.31.

Stämme gelten den beiden neu gegründeten Kolonien Placentia³⁷ und Cremona am oberen Lauf des Padus. Die flüchtenden Kolonisten und Triumvirn, welche die Landvermessung und -verteilung übertragen bekommen hatten, suchten Schutz in dem bereits 219 v. Chr. befestigten Mutina. Während die Punier vor Sagunt jedoch mit allen Mitteln der Poliorketik zu Werke gehen und sich sowohl bei der Bestürmung wie auch Belagerung von Städten außerordentlich erfahren zeigen, sitzen die aufständischen Gallier, die durch den heranrückenden Hannibal ermutigt wurden, rat- und tatenlos vor den unversehrten Mauern des oberitalischen Mutina. Livius begründet dieses Verhalten der Gallier mit der Erklärung, diesem Volk sei der Sturm auf Städte grundsätzlich unbekannt, darüber hinaus seien sie zur Erbauung von Schanzwerken viel zu träge.³⁸ Polybios überliefert zwar ebenfalls die Einschließung Mutinas, berichtet jedoch keinerlei weitere Details. Gleichwohl spricht er jedoch vom Vorgang des Belagerns mit dem Terminus *technicus* *πολιορκέω* und verdeutlicht den Rezipienten seines Werkes – ganz im Gegensatz zur Darstellung des Livius – die Normalität dieses Vorgangs.³⁹ Dass man überhaupt über Mauern verfügt und entsprechende militärische Mittel und Techniken zur Überwindung von Befestigungsanlagen in Anwendung bringen kann oder die Fähigkeit besitzt, sich bei einer Bestürmung entsprechend zu verteidigen, ist nach Auffassung des Livius abhängig vom Grad der jeweiligen kulturellen Entwicklung.⁴⁰ Diese Auffassung steht in engem Zusammenhang mit einem in augusteischer Zeit verbreiteten ethnographischen Modell: Die Bewohner des kalten und feuchten Nordens seien dank ihrer körperlichen Stärke zwar mutig, jedoch mangle es ihrem schwerfälligen Geist infolge eines dickflüssigeren Blutes an Erfindungsgebe.⁴¹ Klima, Mensch und Kultur – zu letzterem gehören der Mauerbau und

die Belagerungstechnik – stehen in diesem Verständnis in unmittelbarem Zusammenhang⁴² und Livius macht von derlei ethnischen Stereotypen anderer Völker häufig Gebrauch.⁴³ Die Römer freilich besitzen nach Livius die Disziplin, Härte und technischen Fähigkeiten, die sie zu einer langen Belagerung von befestigten Städten befähigt.⁴⁴

Neben dem angeführten Beispiel lässt sich eine ganze Bandbreite verschiedener historischer Kontexte, Funktionen und Bedeutungen für Stadtmauern und Befestigungsanlagen bei Livius unterscheiden.

Die sicherlich am häufigsten vorkommende Bedeutung von Stadtmauern ist die des Schutzes.⁴⁵ Ein solches Zeugnis wäre etwa die Sicherung der Mauern und Türme Roms durch die beiden Konsuln nach der Niederlage der Römer gegen Hannibal am Trasimenischen See im Frühjahr 217 v. Chr.⁴⁶ Das neben der Verteidigung der Stadtmauern auch Flucht eine Option war, schildert Livius für Rom. Nach dem Eintreffen der Nachricht der katastrophalen Niederlage von Cannae 216 v. Chr. ist die von Livius dramatisch geschilderte Panik unter den Einwohnern so groß, dass diese gezwungen werden sollten: *cogantque homines nullam nisi urbe ac moenibus salvis salutem sperare*.⁴⁷ Der Erhalt der Stadt und der Gemeinschaft ist, wie nicht anders zu erwarten, im Falle eines Angriffs vom Erhalt der Mauern abhängig. Der Einzelne hingegen konnte auch ohne die Gemeinschaft zumindest überleben. Die Gemeinschaft der Bürger jedoch ist ohne die Verteidigung und den Erhalt der Stadtmauern gefährdet. So waren im Falle der Stadt Gerunium beschädigte Mauern ein Sicherheitsrisiko und führten dazu, so berichtet Livius für das Jahr 217 v. Chr., dass die Einwohner die Stadt verließen: *Ex Paelignis Poenus flexit iter retroque Apuliam*

³⁷ Zur Gründung Placentias 218 v. Chr. s. Ascon. in Pis. 2 (vgl. Lewis 2006, 5–6 und den Kommentar 195–6).

³⁸ Livy 21.25.6: *gens ad oppugnandarum urbium artes rudis, pigerrima eadem ad militaria opera, segnis intactis adsideret muris*; zur topischen Beschreibung der Kelten vgl. Livy 5.37.4–8; 5.39.5–8; 38.17.9–11 und öfter, zum Bild der Kelten bei Livius Kremer 1994, 17–80.

³⁹ Polyb. 3.40.8; zum durchaus stereotypen Keltenbild des Polybios (z. B. 2.17.9–11) vgl. Foulon 2001.

⁴⁰ Auch bei den Saguntinern wird ja hervorgehoben, dass die beschriebene Bauart altertümlich sei (Livy 21.11.8: *structurae antiquae*). Ähnliche Topoi in Bezug auf die Fähigkeit der Barbaren Städte zu belagern oder auch belagerte Städte zu verteidigen finden sich noch in Livy 27.41.3; 31.21.5; 34.20.8–9; 41.11.3. Auch Polybios (z. B. 7.10.8) betrachtet Stadtmauern als ästhetisches und wehrtechnisches Monument und gibt damit zu verstehen, welche kulturelle Leistung aufwendige Fortifikationen sind.

⁴¹ Vit. 6.1.9–10; vgl. zum Zusammenhang zwischen Klima und menschlichen Eigenschaften u. a. Livy 38.17.9–11 und 17; Tac. *Germ.* 29.

⁴² Vgl. Knell 1993.

⁴³ Levene 2010, 216–22.

⁴⁴ Verwiesen sei hier nur auf eine Belegstelle: Livy 5.6.8–9.

⁴⁵ Hierzu gehört zweifellos auch in Zeiten des Krieges die Schilderung der Evakuierung unbefestigter Plätze durch Livius wie z. B. in 22.11.4. Vgl. zur Normalität solcher Schutzmaßnahmen Erdkamp 1992, 135 und Anm. 15 mit weiterer Literatur.

⁴⁶ Livy 22.8.7: *iisque negotium ab senatu datum, ut muros turresque urbis firmarent* [...] *pro urbe dimicandum esse ac penatibus, quando Italiam tueri nequissent* (Hervorhebung Verf.); weitere Beispiele sind: 23.16.3 (Nola); 23.35.12 (Cumae). Die Beispiele sind zahlreich, da jeder Quellenbeleg, der etwa eine Belagerung erwähnt, gleichzeitig als Beleg für die schützende Funktion von Mauern gewertet werden kann.

⁴⁷ Livy 22.55.8: „[...] die eigene Rettung nur von der Erhaltung der Stadt und ihrer Mauern zu erwarten.“

*repetens Gereonium pervenit, urbem metu, quia conlapsa ruinis pars moenium erat, ab suis desertam.*⁴⁸ Aber auch von Truppen entblößte Mauern bieten keinen Schutz gegen ein feindliches Heer, wie Livius in stark übertriebener und dramatisierender Weise die Situation Roms nach der Niederlage an der Trebia 218 v. Chr. inszeniert.⁴⁹ Diese häufig belegte Schutzfunktion wird auch auf natürliche Barrieren wie die Alpen übertragen.⁵⁰ Doch werden den Mauern im Werk des Livius neben der Schutzfunktion durchaus noch weitere Funktionen zugeschrieben. So lässt etwa Livius den Konsul des Jahres 216 v. Chr. C. Terentius Varro⁵¹ nach der Niederlage bei Cannae in Venusia eine Ansprache an eine Gesandtschaft aus Capua richten.⁵² Varro betont, dass Rom während der Samnitenkriege für die Kampaner gekämpft hätte. Während sich jedoch die Kampaner aus Furcht vor den Feinden verängstigt hinter ihren Stadtmauern (*moenia*) zusammengedrängt hätten,⁵³ waren es die römischen Truppen, welche die Hauptlasten des Krieges trugen und den Sieg erfochten. Der Furcht der verzagten Kampaner hinter den Mauern wird der Mut der im offenen Gelände kämpfenden Römer entgegengesetzt, die 343 v. Chr., eingeschlossen bei Saticula,⁵⁴ dem samnitischen Heer widerstanden und einen Sieg davontrugen.⁵⁵ Die stark moralisierende Weise, in der Livius in dieser Rede des C. Terentius Varro die Stadtmauern zu einer Grenze zwischen Verzagtheit und Mut macht,⁵⁶ verdeutlicht, wie stark und nach welchen Kriterien der Historiker aus Padua seinen Stoff gestaltete.⁵⁷ Vielleicht nicht ganz zufällig wertet Livius den Rückzug

eines Teils des bei Cannae geschlagenen Heeres unter demselben Konsul Terentius Varro nach Canusium⁵⁸ ähnlich: [...] *moenibusque se certe, si non armis, ab hoste videbantur defensuri.*⁵⁹ Auch hier wird von Livius der Kampf in einer Feldschlacht höher bewertet als der Kampf der Verteidiger hinter den Mauern einer Stadt. Die offene Schlacht wird sogar allein mit dem Kampf mit Waffen gleichgesetzt und damit der Verteidigungskampf auf den Stadtmauern – so als ob dieser ohne Waffen geführt werden könnte – rhetorisch abgewertet.

Mit der schützenden Funktion von Mauern ist häufig die Beschreibung eines Angriffs oder einer Belagerung verbunden. Auf die starke und auch immer wieder nach den gleichen Prinzipien konstruierte rhetorische Gestaltung solcher Belagerungen wurde zu Recht bereits häufiger hingewiesen.⁶⁰ Trotz dieser stark rhetorischen Gestaltung solcher Beschreibungen, die in jeder Analyse berücksichtigt werden müssen, gilt jedoch auch, dass allein eine rhetorische Gestaltung des Stoffes die Erzählung noch nicht zur Fiktion macht.⁶¹ Im Rahmen dieser Thematik schildert Livius strukturell immer wieder die gleichen, in Episoden⁶² gegliederten Abläufe,⁶³ verbunden mit dem Bemühen, den Stoff durch Variationen für den Leser interessanter zu gestalten.⁶⁴ So auch bei der Belagerung Cumaes durch die karthagischen Verbände im Jahr 215 v. Chr.:⁶⁵ Die in der Stadt eingeschlossenen römischen Truppen unter dem Befehl des Konsuls Ti. Sempronius Gracchus⁶⁶ erwehren sich mit allen Mitteln

⁴⁸ Hervorhebung vom Verf. Livy 22.18.7: „Die Einwohner hatten die Stadt aus Furcht verlassen, denn ein Teil der Mauern lag in Trümmern“; Gerunium liegt in Apulien und ist nach Polybios (3.100.3) 200 Stadien von Luceria entfernt.

⁴⁹ Livy 21.57.1; vgl. auch die Angst des Konsuls Cn. Servilius Geminus (Broughton 1951, 242) um die Mauern der Vaterstadt (*moenibus patriae*), nachdem er von der Niederlage am Trasimenischen See erfahren hatte (Livy 22.9.6).

⁵⁰ Beispielsweise Livy 21.35.8–9; vgl. Polyb. 3.54.2, der die Alpen als Burg (*ἀκροπόλις*) Italiens bezeichnet. Weitere Quellenstellen zu den Alpen als schützende Barriere bei Chevallier 1980, 39–40.

⁵¹ Broughton 1951, 247.

⁵² Livy 23.5.4–15. Kurz darauf fällt Capua von Rom ab und wechselt auf die Seite Hannibals (Livy 23.6–10; Diod. Sic. 26.13).

⁵³ Livy 23.5.8: *ut trepidos quondam maiores vestros intra moenia compulsos.*

⁵⁴ Stadt in Samnium, wohl beim heutigen Sant’Agata dei Goti.

⁵⁵ Zu den Ereignissen bei Saticula Livy 7.32.2; 7.34–37.3.

⁵⁶ Ein weiteres Beispiel wäre Livy 22.54.6. Dort wird der Rückzug hinter die Mauern gegenüber dem Kampf mit Waffen herabgesetzt.

⁵⁷ Walsh 1961, 46–109; vgl. Levene 2010, 339–54, zu Capua 354–75.

⁵⁸ Broughton 1951, 247 mit weiteren Quellen.

⁵⁹ Livy 22.54.6: „[...] Es sah aus, als wollte man sich zumindest hinter den Mauern verteidigen, wenn schon nicht mit Waffen.“

⁶⁰ Die bei Livius geschilderten Belagerungen wurden bisher häufig auf ihre rhetorischen Aspekte hin untersucht (vgl. Walsh 1961, 157–63 und 197–204; Roth 2006, 61 Anm. 3 mit Literatur; Urban 1966). Die militärhistorischen Aspekte stehen bei Roth 2006 im Mittelpunkt, ebenfalls militärhistorisch von Interesse: Koon 2010 und Sabin 1996.

⁶¹ Roth 2006, 49 merkt zu Recht an: „Even the most accurate and objective account must follow conventions of writing. It may be that a focus on rhetorical elements have led some commentators to miss the fact that Livy’s narratives reflect underlying realities of siege warfare.“

⁶² Kraus 1994, 12; auch wenn die Strukturierung (Dreiteilung) nicht immer gleichmäßig erfolgt (Walsh 1961, 5–6, 178–9, 274).

⁶³ McDonald 1957, 168–9; Kraus 1994, 21–2; Roth 2006, 59.

⁶⁴ Walsh 1961, 196, 200–1; wenngleich ab der dritten Dekade erkennbar wird, dass Livius die Belagerungen nicht mehr ganz so frei gestaltet, sei es da die historischen Ereignisse besser belegt sind oder sei es da bereits die Vorlagen mehr Variationen bieten (vgl. Roth 2006, 60).

⁶⁵ Livy 23.32.1; 23.35.1–37.9. Wobei dies, wie bereits erwähnt, kein Grund ist, derlei Schilderungen gänzlich ins Reich der Fiktion zu verweisen; vgl. Roth 2006, 57: „Literary topoi also do not necessarily reflect fictionalization, since all battles share certain patterns.“

⁶⁶ Broughton 1951, 253–4.

der mit Unterstützung von Belagerungsmaschinen vorgehenden Angreifer. Die Belagerten unternehmen einen Ausfall und schlagen die Feinde zurück, da die Posten, wie Livius wertend feststellt, sich im Umfeld der Stadtmauer sorglos und nachlässig verhalten hatten.⁶⁷ Ähnlich bewertet er das Verhalten des Konsuls Sempronius positiv, der sich nicht durch die Freude über diesen Sieg gegen die Karthager durch Hannibal zu einer offenen Feldschlacht verleiten lässt.⁶⁸ Belagerungen folgen der narrativen Logik des Livius,⁶⁹ der bei zahlreichen solcher Schilderungen von Belagerungen moralische Botschaften vermittelt und diesen auch die in seinen Quellen vermittelten Geschehnisse anpasst. Ein gutes Beispiel für eine derartige Gestaltung des Stoffes ist die Belagerung von Tarentum durch Hannibal.⁷⁰ Dieser umgibt nach der Einnahme der Stadt 212 v. Chr. die *arx*, in der sich die Römer verschanzt hatten, mit einem Graben und Wall, da die *arx* – so Hannibal bei Livius – durch ihre Lage, eine riesige Mauer und einen tiefen Graben nicht im Sturm oder mit Belagerungsmaschinen zu nehmen gewesen sei.⁷¹ Sogar eine Mauer lässt Hannibal hinter der Graben-Wall-Konstruktion bauen, damit die Tarentiner sich auch ohne karthagische Kontingente gegen die Römer behaupten könnten. Bei der Inspektion des Mauerbaus verfällt Hannibal nach Livius auf die Idee, die *arx* doch mit Belagerungsmaschinen angreifen zu wollen, da die *arx* nicht auf einer Anhöhe liege und nur durch einen Wall und einen Graben von der Stadt getrennt sei.⁷² Die Widersprüche der beiden kurz aufeinanderfolgenden Einschätzungen der Lage und Befestigung der *arx* durch Hannibal, einmal als kaum einnehmbar und einmal als einnehmbar, sind ebenso eklatant wie die daraus gezogenen Schlussfolgerungen des karthagischen Feldherren. Die beiden sich widersprechenden Beurteilungen der *arx* und daraus folgenden Schlussfolgerungen sind nun auch

genau jene Komponenten, die Polybios, der ansonsten einen weitgehend identischen Verlauf der Belagerung von Tarentum beschreibt, in seiner Erzählung nicht anführt.⁷³ Während in der Schilderung des Livius Hannibal widersprüchlich und sprunghaft handelt und die Situation falsch einzuschätzen scheint, handelt Hannibal bei Polybios stringent. Auch der Grund, warum Hannibal nach der Schilderung des Livius plötzlich die Chance, die *arx* zu erobern, höher einschätzt, ist bezeichnend. Die schnellen Fortschritte beim Bau der Mauer hinter der Graben-Wall-Konstruktion veranlassen ihn unvermittelt, an die Möglichkeit der Eroberung der Burg zu glauben. Die Schilderung der Belagerung Tarents weist zwar noch einige andere Unklarheiten auf.⁷⁴ Doch ist für das hier zu erörternde Thema allein von Bedeutung, dass Livius,⁷⁵ der ansonsten der polybianischen Schilderung der Ereignisse folgt, offensichtlich eigenständig Hannibals Kompetenz in Bezug auf die Belagerungstechnik und die strategische Einschätzung der fortifikatorischen Aspekte durch die Einschübe in Frage stellt. Für Livius stehen in diesem konkreten Fall Hannibals Fähigkeiten als Feldherr im Mittelpunkt und weniger die fortifikatorischen Maßnahmen bei der Belagerung Tarents.

Die abschreckende Wirkung von Mauern auf Angreifer hält Livius u. a. im Zusammenhang mit der Belagerung Neapels im Jahr 216 v. Chr. durch Hannibal fest: *Ab urbe oppugnanda Poenum absterruere conspecta moenia haudquaquam prompta oppugnanti*.⁷⁶ Noch im gleichen Jahr soll Hannibal nach Livius zwei weitere Male versucht haben, sich der Stadt und ihres Hafens zu bemächtigen.⁷⁷ Auch Prokop, der rund 560 Jahre nach Livius schreibt, schildert die Mauern Neapels als kaum einnehmbar und unzugänglich, was nicht zuletzt auf die Lage und das Gelände zurückzuführen sei.⁷⁸ Freilich

⁶⁷ Livy 23.37.6: *solute ac neglegenter*.

⁶⁸ Livy 23.37.8: *Postero die Hannibal, laetum secunda re consulem iusto proelio ratus certaturum, aciem inter castra atque urbem instruxit*.

⁶⁹ Roth 2006, 60 weist darauf hin, dass Livius kaum Zeitangaben zum Bau von Belagerungswerken und -maschinen oder auch der Dauer von Belagerungen macht. Ganz anders die griechischen Historiker, die Thukydides folgend häufig die Dauer von Belagerungen nennen. Auch die Angaben zur Länge von Stadtmauern sind bei Livius nicht allzu häufig (vgl. Livy 24.3.8 zum Mauerring von Kroton).

⁷⁰ Livy 25.9.1–11.20. Die Datierung der Belagerung ist, so schreibt Livius, bei seinen Gewährsmännern unterschiedlich (Livy 25.11.20). Zur Gestaltung des Stoffes im Falle Tarentums s. auch Levene 2010, 302–3.

⁷¹ Livy 25.11.1–2: *Postero die ad oppugnandam arcem ducit; quam cum et <a> mari, quo in paene insulae modum pars maior circumluitur, praealtis rupibus et ab ipsa urbe muro et fossa ingenti saeptam videret eoque nec vi nec operibus expugnabilem esse*. Zu den Ereignissen nach der Einnahme von Tarentum durch Hannibal und der Belagerung der *arx* vgl. Fronda 2010, 217–9, 260–9.

⁷² Livy 25.11.9: *et est non altitudine, ut cetera<e>, tuta, sed loco plano posita et ab urbe muro tantum ac fossa divisa*. Auf die sich teilweise widersprechenden Beschreibungen der geographischen Gegebenheiten soll hier nur hingewiesen werden (z. B. Horsfall 1982 und Horsfall 1985 zu den topographischen Problemen bei den Schlachtbeschreibungen des Livius).

⁷³ Polyb. 8.32.2–34.1; darauf hat zuletzt auch Levene 2010, 302–3 hingewiesen.

⁷⁴ Levene 2010, 303.

⁷⁵ Oder eben seine Vorlage – z. B. Coelius Antipater –, was nie ausgeschlossen werden kann.

⁷⁶ Livy 23.1.10: „Der Anblick der Mauern, die keineswegs leicht zu erobern waren, schreckte den Punier von der Erstürmung der Stadt ab.“

⁷⁷ Livy 23.14.5–6; 23.15.1–2, die letzte Erwähnung ist eine Dublette (s. auch Frederiksen 1984, 257).

⁷⁸ Procop. *Goth.* 5.8.44.

lassen die archäologischen Reste der Stadtmauer Neapels keine Aussage über den Eindruck, den sie auf einen Angreifer Ende des 3. Jh. v. Chr. gemacht hat, zu.⁷⁹ Die Begründung für die Abschreckung ist jedoch nicht etwa die imposante Bauweise oder das unzugängliche Gelände,⁸⁰ sondern der Aufwand bei einer Belagerung sei zu groß und damit eine schnelle Eroberung nicht möglich (*haudquaquam prompta oppugnanti*). Livius bezieht die abschreckende (*absterrere*) Wirkung der Mauer demnach nur auf den unverhältnismäßigen Aufwand, den ein Eroberungswilliger zu betreiben hätte.

Zuletzt seien noch zwei weitere historische Kontexte genannt bzw. Deutungsmuster, die in Zusammenhang mit Befestigungsanlagen bei Livius relevant sind. Das wären zum einen die zahlreichen Berichte über Blitzeinschläge in Stadtmauern und Tore und zum anderen die Bedeutung, die Mauern, Türme und Tore bei Stadtgründungen oder ganz allgemein bei Städten, indem sie deren sakrale, politische oder ökonomische und rechtliche Grenzen symbolisierten, zugeschrieben wurde.⁸¹

Die bei Livius angeführten Vorzeichen führen für die Jahre 214–212 v. Chr. jeweils Blitzeinschläge in Stadtmauern und Türme auf: 214 schlug ein Blitz in die Stadtmauer und ein Stadttor von Gabii ein, 213 schlug ein Blitz auch in die Stadtmauer und Tore Caietas ein und 212 sollen schließlich Teile der Stadtmauer und Türme von Cumae eingestürzt sein: *Murus turresque quaedam Cumis non ictae modo fulminibus, sed etiam decussae*.⁸² Nicht jeder Blitzeinschlag fand Eingang in die Prodigienliteratur und die römische Historiographie.⁸³ Es wird sogar der weitaus geringste Teil gewesen sein. Doch waren in Krisenzeiten, wie es der zweite römisch-karthagische Krieg mit Sicherheit war, eine größere Zahl an gemeldeten und offiziell anerkannten Vorzeichen nichts Außergewöhnliches. Das Verhältnis zu den Göttern war, dies zeigten die

verheerenden Niederlagen und Auswirkungen auf die Bevölkerung, aus dem Gleichgewicht geraten. Die Unsicherheit und Ängste sensibilisierten für mögliche Vorzeichen. In dieser religiösen Semantik kam auch Stadtmauern, Toren und Türmen eine wichtige Funktion zu. In einer Zeit der Unsicherheit, Bedrohung und Furcht sind es gerade die schützenden Stadtmauern, welchen die besondere Aufmerksamkeit gilt. Auch wenn Livius für das Jahr 214 ausdrücklich die Herkunft und Glaubwürdigkeit der gemeldeten Vorzeichen bezweifelt,⁸⁴ sind derartige Berichte über Stadtmauern und andere Befestigungsanlagen in den meisten Fällen von hohem Wert, da sie zumindest die semantische Aufladung von Stadtmauern belegen. Die Meldung solcher Vorzeichen kann zudem Hinweise für die Datierung von Stadtmauern geben.⁸⁵ Obgleich Livius der Glaubwürdigkeit der gemeldeten Vorzeichen gegenüber skeptisch ist und vor allem das einfache Volk für derlei religiöse Hysterie kritisiert, stellt er aber keineswegs die grundsätzliche Bedeutung solcher Vorzeichen infrage. Die semantische Aufladung der Stadtmauern ist damit, ob nun für die Zeit des 2. Punischen Krieges oder die Zeit des Livius, unzweifelhaft.

Dass Stadtmauern auch als markantes Merkmal einer Stadt gelten und in engem Zusammenhang mit Stadtgründungen genannt werden können, ist wohl eine der am deutlichsten hervortretenden Rollen von Stadtmauern, Toren und Türmen in den Quellen.⁸⁶ Häufig ist die Stadtmauer das oder ein wesentliches Merkmal einer Stadt. Besonders im militärischen Zusammenhang werden Stadt und Stadtmauer fast synonym verwendet⁸⁷ und der Erhalt der Mauern wird mit der Bewahrung der Bürgergemeinschaft gleichgesetzt.⁸⁸ Doch sind die sichtbaren Grenzen einer Stadt, die Mauern, für zahlreiche weitere Bereiche, wie die der Ökonomie, des Rechts oder der Religion von Bedeutung.⁸⁹ All diese Bereiche sind auch im Werk des Livius wiederzufinden.

⁷⁹ Greco 1986, 187–219. Greco spricht bezüglich der hier von Livius genannten Mauer von zwei Bauphasen (5. und 4. Jh. v. Chr.).

⁸⁰ So Procop. *Goth.* 5.8.44.

⁸¹ Zu letzterem vgl. die äußerst instruktive Arbeit von Stevens 2010.

⁸² Livy 25.7.8 (Cumae): „Die Mauer und einige Türme in Cumae wurden nicht nur vom Blitz getroffen, sondern auch umgeworfen“; Livy 24.10.9 (Gabii); Livy 24.44.8 (Caieta); Livy 25.7.8 (Lagerwall von Suessula); vgl. Engels 2007, 451–3.

⁸³ Zu den Vorzeichen im Werk des Livius s. Engels 2007, 188–219.

⁸⁴ So z. B. in Livy 24.10.6; 22.55.6. Seine Zweifel beziehen sich aber nicht auf die Echtheit der Überlieferung bzw. auf seine Vorlagen.

⁸⁵ Die Wertung eines solchen Vorzeichens als Beleg für die Existenz oder die Datierung einer Stadtmauer ist problematisch und streng genommen an die Frage nach den Quellen des Livius für die berichteten Prodigien gekoppelt. Die Frage nach den Quellen und der Glaubwürdigkeit der Prodigien ist zumindest kurz bei Engels 2007, 193–6 behandelt, kann an dieser Stelle jedoch nicht weiter vertieft werden.

⁸⁶ Rebuffat 1984, neben einer Aufstellung aller Quellen findet sich hier auch eine kleine Auswahl an Mosaiken mit der stark zeichenhaften Darstellung von Städten, die durch Mauern, Tore und Türme kenntlich gemacht sind. Vgl. auch Stevens 2010.

⁸⁷ So z. B. Livy 22.39.13; für das Verhältnis von *τείχος* zu *polis* in den literarischen Quellen zum archaischen Griechenland s. den instruktiven Abschnitt bei Frederiksen 2011, 24–5.

⁸⁸ Vgl. hierzu oben Livy 22.55.8 zu Rom nach der Niederlage von Cannae (mit Anm. 47).

⁸⁹ Vgl. hierzu auch den Beitrag von Saskia Stevens in diesem Band.

Der kurze skizzenhafte Überblick über die historischen Kontexte, Funktionen und die Semantik von ‚Mauern‘ bei Livius hat gezeigt, dass die quellenkritische Untersuchung unter Hinzuziehung von Parallelquellen unabdingbar ist: einerseits um mithilfe solcher Untersuchungsergebnisse den Wert der Quellen im Einzelfall für die archäologische Forschung besser einschätzen zu können, andererseits um eine bessere Vorstellung davon zu gewinnen, welche unterschiedlichen Bedeutungen Befestigungsanlagen von den verschiedenen antiken Kulturen zugeschrieben wurden und in welchem historischen Kontext bestimmte Deutungsmuster andere ablösten. Was die Schilderung von Mauern, Türmen und Toren während des zweiten römisch-karthagischen Kriegs im Werk des Livius betrifft, lässt sich zumindest ein differenzierteres Bild zeichnen: Die narrative Struktur des Werkes, die rhetorische Durchgestaltung zahlreicher Passagen, was hier leider kaum berücksichtigt werden konnte, die zahlreichen exemplarischen Erzählungen mit den starken Wertungen des Autors und die Einflüsse des augusteischen Geschichtsbildes zeigen klar auf, dass Mauern auch im Werk des Livius durchaus wechselnde Bedeutungen annehmen konnten. Daraus ergibt sich, dass zwar der Quellenwert von Passagen, in denen Mauern Erwähnung finden, für die Rekonstruktion der betreffenden Bauwerke oder Befestigungsanlagen in Teilen gering zu veranschlagen ist,⁹⁰ doch sollte dies nicht darüber hinwegtäuschen, wie oben bereits ausgeführt, dass zumindest einem großen Teil der Berichte des Livius zu militärischen Ereignissen oder auch zu Mauern und fortifikatorischen Maßnahmen – wenigstens ab der dritten Dekade des Werkes – eine historische Realität zugrunde liegt. Die rhetorische und inhaltliche Gestaltung des Autors rechtfertigt es im Falle der hier behandelten Passagen eben nicht, von Fiktion zu sprechen.⁹¹

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⁹⁰ Freilich lohnt sich eine differenzierte Betrachtung der verschiedenen überlieferten Bücher des livianischen Werkes. Denn es gibt durchaus Fälle, in denen geographische/topographische Angaben oder Angaben zu Bauten im Werk des Livius einen hohen Quellenwert beanspruchen können.

⁹¹ Vgl. oben S. 365 mit Anm. 13.

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LES FORTIFICATIONS DE MYRA DANS LA DÉFENSE DE LA LYCIE ORIENTALE

Isabelle Pimouguet-Pédarros & Nevzat Çevik

Résumé

Si l'on ne peut tirer des textes que peu d'informations concernant les fortifications de la cité de Myra, il n'en est pas de même de l'archéologie ; en effet, le site se caractérise par la présence de nombreuses constructions défensives dont l'étude devrait permettre de compléter les lacunes des sources littéraires. Plusieurs questions se posent. La première est de savoir à quelle date précisément le système défensif de Myra et de son port Andriaké fut érigé et par quel commanditaire ? Faut-il l'attribuer à l'un des pouvoirs dominants de la période hellénistique (antigonide, lagide, séleucide ou rhodien) ou fut-il mis en chantier par la cité elle-même à l'époque de la formation de la ligue lycienne ? La deuxième est de savoir quelle était la fonction précise de ce système et son étendue. Était-il organisé en réseau autour de l'acropole ou au contraire chaque fortification fonctionnait-elle de manière autonome ? La troisième, enfin, est de savoir quelles furent les différentes phases d'utilisation de ce système. Fut-il modifié ou renforcé après la période hellénistique ? Tenter de répondre à ces questions est essentiel pour pouvoir retracer l'histoire de la cité, mais aussi, de manière plus générale, celle de la région.

Les textes ne font pas mention de Myra avant la fin de la période hellénistique. Pourtant, compte tenu de sa situation géostratégique, il ne fait aucun doute qu'elle prit place dès l'époque d'Alexandre, à l'instar de ses voisines (Xanthos, Patara, Limyra) dans la construction des espaces politiques avant de devenir, au III^e siècle av. J.-C., une possession lagide.¹ Mais ce fut à partir du II^e siècle av. J.-C., au temps où les cités de Lycie furent déclarées libres par les Romains, que Myra devint importante dans la région, tant d'un point de vue politique qu'économique.² Localisée à l'ouest de la péninsule de Finiké (Fig. 1), elle était l'une des seules à

disposer d'une aussi grande façade maritime, propice à l'installation d'une base navale ainsi qu'au développement d'activités portuaires. Ce positionnement explique que sa défense ait été tournée presque exclusivement vers la mer, en particulier aux époques hellénistique et romaine.

Sur son territoire subsistent de nombreux ouvrages fortifiés : outre les murs de l'acropole lycienne, on observe les restes d'un rempart dans la ville basse, d'une tour isolée et d'une forteresse dans la zone portuaire, ainsi qu'une série de forts sur les collines environnantes. Ces fortifications peuvent-elles être mises en relation

¹ Meadows 2006.

² Strab. 14.666. Voir aussi Ptol. *Geog.* 5.3.6 ; Plin. *HN* 5.100 ; Ael. *Ar.* 24. Il est précisé qu'elle comptait parmi les six plus importantes cités de la région.

avec les souverains hellénistiques ou faut-il en attribuer la mise en chantier à la cité elle-même ? Existait-il déjà un système de défense aux époques archaïque et classique, et si tel était le cas, quelle était sa forme ?

J. des Courtils a noté que les remparts de Xanthos constituaient le plus grand ensemble architectural de Lycie et, comme ils furent érigés dans la plus grande cité de la région, il a suggéré qu'ils pouvaient avoir servi de modèle aux constructeurs antiques des autres cités lyciennes.³ Le présent article tentera de vérifier cette hypothèse par une mise en perspective, mais aussi et surtout s'attachera à déterminer la date de construction et la fonction stratégique de chaque ouvrage fortifié.⁴

I. Les fortifications urbaines

La ville antique fut construite sur les versants d'une colline qui faisait office d'acropole, au-dessus d'une vallée, fermée au nord-ouest par une chaîne de montagnes. Elle était dotée d'une excellente situation topographique, bénéficiant de la protection de défenses naturelles tout en ayant une grande facilité d'accès à la mer. En effet, le fleuve Myros favorisait non seulement les échanges avec l'arrière-pays et la vallée mais aussi le développement du commerce extérieur par voie de mer (Fig. 1). Si l'on se réfère à Strabon, l'acropole lycienne était éloignée de la mer d'environ vingt stades ;⁵ aujourd'hui, la distance est de plus de trente stades. Au temps du géographe,



Fig. 1 Carte des fortifications de Myra-Andriaké (I. Pimouguet-Pédarros).

³ des Courtils 1994, 285.

⁴ Les analyses et conclusions que nous livrons ici sont le produit de plusieurs campagnes de fouilles et de prospections archéologiques entreprises de 2009 à 2013. Elles ont été effectuées sous l'égide du Ministère français des Affaires Étrangères et avec l'appui du Ministère turc de la culture et du tourisme, voir Çevik & Pimouguet-Pédarros 2010 ; Çevik & Pimouguet-Pédarros 2011 ; Çevik & Pimouguet-Pédarros 2012. Elles font suite aux travaux de terrain entrepris par J. Borchhardt, puis par Th. Marksteiner. Voir Borchhardt 1975, et aussi dans Borchhardt & Dobesch 1993, la bibliographie par site, spécialement dans le vol. 2, 245-314. Voir encore Marksteiner 2006 ; Marksteiner 2008.

⁵ Strab. 14.666. Voir aussi Ptol. *Geog.* 5.3.6 ; Plin. *HN* 5.100.

l'occupation ne se limitait pas seulement à la ville haute, elle s'étendait aussi très largement dans la ville basse. Le plan urbain n'est plus lisible à cause des crues du fleuve, de l'ensablement du port et des dommages causés par les tremblements de terre :⁶ la ville est donc aujourd'hui en partie enfouie et, jusqu'aux récents travaux entrepris par la mission turque, elle n'avait encore jamais fait l'objet d'une fouille archéologique.⁷ Les restes antiques se limitent au théâtre, aux tombes rupestres à façade de temple ainsi qu'à une longue section de mur. L'acropole et cette longue section de mur sont les seuls restes de fortifications urbaines que nous ayons repérés.

L'acropole lycienne constitue le noyau originel de la ville ; on ne sait pas à quand remonte son occupation. Aucune trace d'habitat n'est à ce jour repérable sur le site, mais seule une fouille permettrait d'obtenir des informations significatives.⁸ L'analyse architecturale des murs laisse toutefois penser qu'elle fut fortifiée et aménagée entre le VI^e et le V^e siècle.⁹ C'était là que résidaient, à cette époque, les dynastes locaux. Avaient-ils élevé ces remparts pour se défendre contre des Grecs ou contre les Perses qui les dominaient ? Ou simplement pour exprimer leur puissance ? C'est la question que s'est posé J. des Courtils à propos de l'acropole de Xanthos.¹⁰ Nous pensons qu'outre leur caractère défensif, ces hauts lieux fortifiés avaient une valeur symbolique comme le suggèrent les tombes rupestres à décors figurés situées à proximité.

Toutefois, si l'essentiel des murs date de l'époque classique, voire d'une période plus ancienne encore, les nombreuses réparations de l'époque hellénistique (Fig. 2) montrent que le site conserva sa fonction stratégique pendant plusieurs siècles. L'acropole lycienne pourrait à cette époque avoir servi de poste de garde et d'observation et avoir été mise en relation avec les forts environnants. Nous verrons dans les pages qui suivent qu'il existait un réseau fortifié dont l'acropole constituait certainement le centre. Celle-ci fut en tout cas réoccupée à la période byzantine et ses murs firent l'objet de renforcements sur presque tout leur périmètre. Au VII^e siècle ap. J.-C., afin de se protéger contre les incursions de la flotte arabe, nous



Fig. 2. Remparts de l'acropole de Myra : blocs rectangulaires avec emboîtements (cliché I. Pimouguet-Pédarros/N. Çevik).



Fig. 3. Mur de la ville basse de Myra : blocs rectangulaires pseudo-isodomes (cliché I. Pimouguet-Pédarros/N. Çevik).

savons que le circuit fortifié de Xanthos fut reconstruit à la hâte.¹¹ Il est probable que Myra fut contrainte au même moment de faire face à cette menace et de repenser elle aussi la défense de son territoire.

Avec le développement commercial de la cité,¹² l'agglomération urbaine, qui s'était peu à peu développée

⁶ Aelius Arist. 24. Le tremblement de terre de 141 ap. J.-C. endommagea une grande partie du théâtre, lequel fut reconstruit grâce aux dons du citoyen Licinius Langus d'Oinoanda. Voir Bean 1989, 120–2. Sur ce tremblement de terre, voir Delrieux 2008, 215–23.

⁷ Mission turque dirigée par N. Çevik, voir Çevik 2010.

⁸ Nous avons, lors de notre dernière campagne, effectué un travail préparatoire sur l'acropole en vue de la fouille programmée pour 2014.

⁹ Voir Çevik & Pimouguet-Pédarros 2010, 243–6. L'occupation de celle de Xanthos remonte au VII^e siècle av. J.-C. Elle fut fortifiée dans le second quart du V^e siècle comme l'indiquent les données stratigraphiques, mais peut-être l'était-elle déjà au VI^e siècle, ce qui serait la preuve de l'existence d'un premier rempart datant de l'époque perse. L'appareil utilisé est polygonal, à parement brut d'extraction semblable à certaines parties des murs de l'acropole de Myra (secteur sud). Sur Xanthos, voir des Courtils 1994, 296–7.

¹⁰ des Courtils 1994, 296.

¹¹ des Courtils 1994, 289 et 297.

¹² Sur le développement commercial de la Lycie : Rostovtzeff 1941, II, 335–7.

au pied de l'acropole, finit par s'étendre jusqu'à la mer. Ce développement conduisit certainement à la mise en place d'un nouveau programme de fortification. Nous pensons que ce fut entre la fin du IV^e et le I^{er} siècle av. J.-C. que la muraille de la ville basse fut érigée (Fig. 3), en complément au système défensif de l'acropole. La section de muraille que l'on peut observer à l'est du théâtre subsiste sur plus de 140 m de long. Son style de construction est très proche de celui du fort « ouest » ou encore de la tour isolée d'Andriaké, que l'on date de la période hellénistique ; cette datation a été confortée par la mise au jour dans le théâtre d'un mur en tous points comparables qui remonte, sur le fondement de données stratigraphiques, à avant l'époque romaine. Il existait donc un grand rempart protégeant la ville à la période hellénistique. On ne sait pas, dans l'état actuel des recherches, s'il y en avait un plus ancien dans un autre secteur. C'est une hypothèse qu'il convient de ne pas écarter ; car à Xanthos, il est attesté qu'un grand rempart protégeait la ville dès l'époque classique, intégrant une partie de la nécropole.¹³ Ce rempart fut renforcé et remanié au II^e siècle av. J.-C., au moment où la Lycie fut libérée de la tutelle des royaumes (lagide puis séleucide) et des états grecs (Rhodes).¹⁴ Il est probable que ce phénomène d'affranchissement conduisit également sur d'autres sites à la mise en chantier de fortifications, mais dans le cas de Myra, nous ne disposons encore d'aucun indice probant.

II. Les fortifications portuaires d'Andriaké

Les fortifications d'Andriaké se situent au sud du bassin portuaire, en position dominante (Fig. 4). Elles se composent de deux éléments distincts : 1) une tour isolée s'élevant à l'ouest des quais, sur le plus haut point de la péninsule (Fig. 5) ; 2) un rempart flanqué de tours, situé à une dizaine de mètres plus loin, sur un éperon rocheux connu sous le nom d'Ince Burun (Fig. 6). Cet ensemble, si l'on en juge par son style de construction et ses dispositifs tactiques, est antérieur à la période de domination romaine.¹⁵

Le siège dont elle fit l'objet au I^{er} siècle av. J.-C. l'atteste : on apprend que Lentulus, commandant de Brutus, assiégea la cité après avoir brisé la chaîne du port placée à l'embouchure du fleuve ;¹⁶ à cette date, l'occupation ne se limitait pas à l'acropole, mais s'étendait très largement dans la vallée, les montagnes environnantes ainsi que sur le littoral, notamment autour du port d'Andriaké qui devait faire figure d'espace péri-urbain.

Notre objectif, lors de la campagne 2011, était de déterminer les phases d'occupation du site et de comprendre le lien fonctionnel existant entre le rempart et le port d'Andriaké. Nous avons donc effectué une fouille en bordure du rempart. Le matériel céramique daté de la période hellénistique est peu abondant mais présent dans tous les sondages ; il permet de valider l'hypothèse selon laquelle le rempart fut érigé entre la fin du IV^e et le I^{er} siècle av. J.-C. Le site fut ensuite réoccupé à la fin de la période romaine et à la période byzantine, à une époque troublée, sans doute à partir du III^e siècle ap. J.-C. Il ne semble pas avoir subi de modifications majeures, hormis la consolidation des citernes et probablement la reprise des couvertures de tuiles. Les pointes de flèches, la balle de fronde et les boulets confirment sa valeur militaire. Les pointes de flèches, au nombre de quatre, appartiennent toutes au même modèle, dit « à pédoncule ». Formées d'un fer et de deux ailerons, elles présentent un renflement sur la partie médiane. Elles mesurent entre 4 et 5 cm de long sur 2 à 3 cm de large. Elles pèsent entre 15 et 18 gr. Elles ressemblent aux modèles grecs de l'Âge du Bronze (1400–1100), à la différence près qu'elles sont deux fois plus grandes. Elles sont également proches de certains modèles romains, tant par leur forme que par leur taille.¹⁷ On manque dans l'état actuel de comparaisons pour la période hellénistique.¹⁸ Nous sommes cependant tentés de les dater de cette période, du fait d'abord des couches stratigraphiques dans lesquelles elles ont été mises au jour, ensuite de la présence d'un Alpha gravé sur l'une d'elles. Quant aux clous mis au jour dans les zones 1 et 5, il pourrait s'agir d'éléments de fixation appartenant à des ouvrages de charpente – peut-être aux catapultes qui se trouvaient sur le chemin de ronde et à l'intérieur

¹³ Voir des Courtils 1994, 296–7. L'existence d'une nécropole *intra muros* ne constitue pas une anomalie, dans la mesure où à Xanthos, comme à Myra, nous sommes en présence non pas d'une cité grecque, mais d'une communauté lycienne s'hellénisant peu à peu.

¹⁴ *Ibid.*, 296.

¹⁵ Borchhardt 1975, 52–5 fig. 7 ; 53 fig. 8 ; 54 pl. 11 et 15 (A–D) ; Borchhardt & Dobesch 1993, plus spécialement le vol. 2, 245–314. Un commentaire de plusieurs pages est consacré à ce système défensif par Wurster 1975. Pour des croquis et des photos, voir aussi Konecny 1997a, pl. 17 fig. 47–8 et pl. 52 fig. 42 (tour d'observation) ; *ibid.* 49–56 et 64–74.

¹⁶ Arr. Succ. 4.110. Il s'agit là de la seule occurrence littéraire susceptible d'être mise en relation avec la défense de la cité.

¹⁷ Chapman 2005 ; Feugère 2002 ; Bishop & Coulston 1993.

¹⁸ Dans l'arc grec composite, nous savons cependant que la pointe de flèche bifide ou trifide, en bronze ou en fer, peut mesurer jusqu'à 7 cm de long. La portée utile du tir est de 60 m et la portée maximale de 200 m. Voir McLeod 1966 ; Garland 1972, 107.



Fig. 4 Vue du port d'Andriaké et du canal depuis l'est (cliché I. Pimouguet-Pédarros/N. Çevik).

des tours. Ces dernières étaient suffisamment grandes et solides pour contenir une lithobole de moyen calibre ou plusieurs oxybèles.¹⁹

Le rempart formait-il un circuit fortifié partant du port, montant sur la colline et traversant le canal ou était-ce un simple mur barrant la crête ? On n'a retrouvé aucun reste de construction sur les pentes de la colline, ni même dans la zone basse. Est-ce à dire qu'il n'existait pas de circuit fortifié ou que celui-ci a disparu ? C'est cette dernière hypothèse que W. Wurster a privilégiée.²⁰

Les modèles de fortifications constitués d'un mur courant sur le sommet d'une colline et sur ses pentes afin d'enclore un port et une agglomération urbaine sont en effet fréquents dans l'architecture militaire grecque antique (Halicarnasse, Cnide) mais nous sommes certainement ici en présence d'un autre type. Il n'était pas nécessaire de protéger le port du côté nord, vers l'intérieur des terres car ce secteur était occupé par une série de forts organisés en réseau ainsi que par l'acropole de Sura qui faisait partie intégrante du territoire de Myra (Fig. 1) ;²¹ de plus, rappelons que le port était fermé



Fig. 5 Tour d'Andriaké (cliché I. Pimouguet-Pédarros/N. Çevik).



Fig. 6 Remparts d'Andriaké : blocs rectangulaires (cliché I. Pimouguet-Pédarros/N. Çevik).

¹⁹ Ober 1992, 150 ; Garlan 1974, 222.

²⁰ Wurster 1975, 53-4.

²¹ Çevik & Pimouguet-Pédarros 2011.

par une estacade. Aussi, d'un point de vue stratégique, un circuit fortifié ne s'imposait aucunement. Rien ne s'oppose donc à l'idée qu'il n'ait existé sur le sommet de la colline qu'un simple rempart, fonctionnant (à l'origine ou peu après) d'une part avec la tour isolée, d'autre part avec les forts de l'arrière-pays.²²

En tout cas, le lieu où se dressent les restes du rempart apparaît comme le plus approprié à la défense du port et aux installations situées à l'arrière, le long du canal. Au sud, il était facile à des bateaux ennemis d'accoster, les fonds étant profonds et les abords peu rocaillieux. Il était donc nécessaire d'établir sur le plus haut point, au-dessus de cette zone d'abordage, une fortification permettant à ceux qui l'occupaient de surveiller les approches en direction de la mer mais aussi de riposter en cas d'attaque par des sorties en force et/ou l'utilisation d'armes de jet (arcs, pierres à lancer, frondes, catapultes). Comme nous l'avons noté, les tours de flanquement étaient suffisamment grandes pour loger plusieurs catapultes et ainsi permettre aux défenseurs de mener une défense active. Mais pourquoi établir ici une ligne de mur, de plus de 400 m de long, flanquée de tours, plutôt que construire une série de tours isolées ? Des tours isolées n'auraient pas permis aux défenseurs de se déplacer aisément sur ce terrain escarpé ; lier les tours à des courtines permettait non seulement d'accroître la stabilité du système de défense mais aussi de permettre une circulation rapide jusqu'à la plate-forme, tout en gardant une pleine vue sur la mer et sur le port. En tout cas, il ne fait aucun doute que le sommet de la colline sur lequel se développe la plate-forme était occupée à l'époque hellénistique par un fort composé de plusieurs chambres destinées à abriter une garnison permanente.²³

III. Les fortifications extra-urbaines

Nous présentons ici trois fortifications extra-urbaines qui comptent parmi les mieux préservées du territoire de

Myra, et d'une manière plus générale de l'Asie Mineure méridionale. Toutes se trouvent en position dominante sur les collines qui composent le massif du Massicytos.²⁴

La première de ces fortifications, connue sous le nom de fort « ouest », se dresse sur un promontoire, à l'ouest de la vallée du Myros (Fig. 1).²⁵ Construite en calcaire local, elle présente un plan presque carré d'environ 10 m de côté (Fig. 7) ; elle est préservée sur presque toute son élévation, soit près de 15 m de haut – sans compter la corniche qui en marquait le couronnement. Seul le système de couverture a disparu. Chaque étage comptabilise au moins une dizaine d'ouvertures. Le style de construction est un appareil rectangulaire pseudo-isodome à carreaux et boutisses. Les faces de parement présentent un bossage rustique travaillé au marteau et des ciselures d'angle. On retrouve des stries en bordure des joints. A l'intérieur, on note l'usage d'un appareil rectangulaire irrégulier tendant vers le trapézoïdal avec des faces de parement grossièrement dressées. Les murs ne sont pas constitués d'un système de remplissage de type *emplekton*.

De l'autre côté du fleuve Myros, à l'est, un autre fort est repérable, que nous qualifierons ici, par convention, sous le nom de fort « est » (Fig. 1).²⁶ Construit sur un éperon rocheux, il s'élève au-dessus d'une gorge profonde constituée par les chaînes de montagnes qui se dressent de part et d'autre du fleuve, asséché en été mais largement pourvu en eau l'hiver. De plan carré, de 10 m de côté, le fort est ouvert uniquement à l'ouest par une fenêtre aménagée dans la partie centrale (Fig. 8) ; celle-ci est surmontée d'un linteau monolithe qui présente, ainsi d'ailleurs que les jambages, un parement vermiculé. A l'intérieur, on ne dénombre qu'une seule pièce. Le fort s'élève encore sur trois niveaux, notamment à l'est, où il est préservé sur 17 assises, soit sur une hauteur d'environ 9 m. A l'intérieur, les niveaux sont repérables par le débord des assises qui forment des corniches à profil mouluré sur lesquelles les planchers prenaient appui, un dispositif déjà observé dans le fort « ouest ». L'appareil

²² Rappelons l'existence sur le territoire de Xanthos d'un grand mur barrant la vallée du Xanthe sur sa rive gauche, voir des Courtils 1994, 297.

²³ Wurster 1975, 54, suggère également l'existence d'une garnison du fait de la présence de citernes et de murs. Ajoutons que c'est ici que l'on a trouvé le plus de mobilier.

²⁴ Borchhardt 1975, 49–56 a dressé un inventaire des forts et tours du territoire de Myra assorti d'un commentaire synthétique ; McNicoll & Winikoff 1983 ont publié leur étude sur le fort de Beymelek à la suite d'enquêtes de terrain menées dans la région en 1969. McNicoll 1997 a fourni dans sa thèse l'étude de deux forts sur le territoire de Myra. Plus récemment, voir Konecny 1997a, 19–26, 33, 42 pl. 8–16 ; 52–3. Leur relevé topographique reste toutefois à effectuer tandis que leur étude technique doit être précisée et complétée par des dégagements partiels ainsi que par des sondages stratigraphiques.

²⁵ McNicoll 1997, 173–4 fig. 42 pl. 78–81, en fait mention sous le titre « West Fort of Myra ».

²⁶ Ce fort n'a été étudié ni par McNicoll, ni par Borchhardt. Ce dernier toutefois l'indique sur son plan de localisation et fournit quelques photos : Borchhardt 1975, 46 fig. 1 pl. B (A-C) (« Myros-Tal »). Plus récemment, Konecny en fait mention dans son ouvrage de synthèse : Konecny 1997a, pl. 14–6.



Fig. 7 Fort « ouest » de Myra : élévation de la façade sud (cliché I. Pimouguet-Pédarros/N. Çevik).



Fig. 8 Fort « est » de Myra : vue de la façade principale (cliché I. Pimouguet-Pédarros/N. Çevik).

utilisé est rectangulaire pseudo-isodome caractérisé par la présence de quelques boutisses. Les faces de parement présentent un bossage rustique et des ciselures d'angle.

Enfin, plus à l'est encore, à proximité du village de Yukarı Beymelek, se dresse un fort en position dominante (Fig. 1)²⁷ depuis lequel on dispose d'une large vue, au nord sur les chaînes de montagnes, au sud sur la lagune et la pleine mer.²⁸ Il se compose de deux tours de plan carré (A et B) reliées par des courtines au nord et au sud de manière à former une vaste cour intérieure (Fig. 9).²⁹ Les courtines sont composées d'un rez-de-chaussée surmonté d'un étage, peut-être de deux, avec un chemin de ronde protégé par un parapet.³⁰ Les tours A et B présentent deux, voire trois étages, soit une hauteur préservée comprise entre 11 et 15 m (Fig. 10). Chaque

étage, à l'intérieur, est marqué par une assise en débord prenant la forme d'une corniche destinée à soutenir les poutres des planchers. Des fenêtres et des meurtrières apparaissent à tous les niveaux de l'élévation. L'appareil utilisé est rectangulaire pseudo-isodome caractérisé par une alternance irrégulière de carreaux et de boutisses. Les faces de parement, travaillées au marteau, présentent un bossage rustique et des joints droits parfaitement taillés.

La forme et la multiplicité des ouvertures montrent qu'il ne s'agissait pas d'un simple poste de garde et d'observation, mais d'une base de défense active ; en effet, les courtines, bordées d'un chemin de ronde, formaient des plate-formes de tir sur lesquelles il était possible d'installer des pièces d'artillerie. Les tours, du

²⁷ Le premier plan a été publié par Wurster 1975, 55 fig. 9 pl. 16–7 (A-D) ; McNicoll 1997, 171–8 pl. 75–7 et 164 fig. 40–1 ; McNicoll & Winikoff 1983, 312–3. Ces derniers critiquent le plan de Wurster et proposent une série de rectifications. Voir aussi Konecny 1997a, pl. 45 fig. 141–2.

²⁸ Il est communément identifié à la tour d'Ision, dont on trouve une mention dans un texte de la fin du II^e ou du I^{er} siècle. En effet, dans le *stadiasmus Maris Magni*, on peut lire : « A partir de la rivière Lamyros jusqu'à la tour appelée Ision il y a 60 stades. A partir de la tour d'Ision jusqu'à Andriaké il y a 60 stades ». La localisation de la tour d'Ision – *pyrgos* dans le texte – a fait l'objet de nombreuses controverses. Reprenant l'ensemble des discussions, McNicoll & Winikoff 1983, 320–3, proposent de placer la tour d'Ision au-dessus du village de Yukarı Beymelek. Cette identification n'est pas pleinement satisfaisante, car aucune inscription portant la mention d'Ision n'a encore été mise au jour dans ce secteur, ni même ailleurs dans la région. De plus, il est à noter que beaucoup de forts construits durant la période hellénistique subsistent encore sur le territoire de Myra, ce qui élargit la liste des possibilités. On doit également observer que le texte du *Stadiasmus* ne fait pas mention d'un « fort » mais d'une « tour », voir *Stadiasmus Maris Magni*, 237–8 (Müller 1855, 237–8).

²⁹ McNicoll 1997, fig. 40. Dans McNicoll & Winikoff 1983, pl. III.3, 315 et III.4, 316, sont proposées une reconstruction isométrique et une coupe transversale du fort.

³⁰ McNicoll & Winikoff 1983, 317–8 et 322 restituent des éléments en bois dans les parties supérieures des courtines. Ils notent que l'épaisseur très réduite des murs, à peine 0,75 m, empêchait l'installation d'un chemin de ronde en pierre et que par conséquent les courtines disposaient de *paradoi* en bois ou *Ikria*. Cette restitution reste hypothétique d'autant plus que nous avons relevé des mesures supérieures de 30 à 40 cm concernant l'épaisseur des murs.



Fig. 9 Fort de Beymelek : tour B et courtine (cliché I. Pimouguet-Pédarros/N. Çevik).



Fig. 10 Fort de Beymelek : élévation de la tour A (cliché I. Pimouguet-Pédarros/N. Çevik).

fait de leur taille et de leur aménagement, constituaient également des espaces à l'intérieur desquels pouvaient prendre place plusieurs catapultes de faible calibre, probablement de type oxybèle.³¹

Dans un article d'A. Konecny,³² on peut lire qu'il existait en Lycie des forts et des tours isolées construits à l'époque hellénistique sans lien avec aucune grande fortification. Prenant l'exemple des forts du territoire de Myra, l'auteur note que leur emplacement (sites difficiles à défendre) et leur proximité avec des pressoirs, des meules ou des aires de battage indiquent qu'ils n'avaient pas de vocation militaire, mais agricole ; ils n'étaient rien de plus que les restes de fermes fortifiées.³³ Nous ne partageons aucunement ce point de vue et ce pour plusieurs raisons : 1) d'abord en raison de leur situation stratégique. Tous se trouvent en position dominante, en bordure de grands axes de communication (routes, fleuve), et bénéficient d'une large vue sur la mer. Le fort « ouest » commandait la route menant à Antiphellos ; il offrait une vue à l'est

jusqu'aux îles chélidoniennes, à l'ouest jusqu'au port d'Andriaké. Le fort « est », situé sur un piton rocheux au-dessus du fleuve Myros, dominait non seulement la route intérieure reliant la côte aux montagnes nord-est, mais également la lagune et la pleine mer au sud. Quant au fort de Beymelek, sa situation lui permettait d'embrasser tout le littoral d'est en ouest. 2) Ensuite, en raison de leurs dispositifs tactiques (fenêtres, meurtrières, archères de type « scorpion ») et de leurs aménagements intérieurs (citernes, cloisonnement de l'espace en différentes pièces), caractéristiques d'établissements militaires. 3) Enfin, en raison de leur style de construction identique à celui des constructions publiques de Myra (parties hellénistiques du théâtre, fortifications portuaires, remparts urbains). Considérant le coût de construction des fortifications en général, il est peu probable que des privés aient fait édifier des fermes fortifiées avec un appareil régulier à bossages et ciselures d'angle, dotées de surcroît d'une surface au sol de près de 100 m² et d'une élévation à trois étages. Les tours du fort de Beymelek,

³¹ *Ibid.* 322, notent que les tours ne pouvaient contenir beaucoup de pièces d'artillerie en raison de la minceur de leurs murs (0,75 m), à la différence de celles de Pergé et de Sidé, dont les murs avaient une épaisseur pouvant aller jusqu'à 2 m. La comparaison n'est pas pertinente dans la mesure où d'un côté nous avons affaire à une fortification extra-urbaine, de l'autre à des enceintes urbaines dotées de dispositifs tactiques plus élaborés. Par ailleurs, plus que l'épaisseur des murs, il semble que ce soit surtout la superficie des tours et leur aménagement intérieur qui déterminent l'usage de nombreuses pièces d'artillerie. Ils suggèrent l'utilisation d'arcs mais aussi de scorpions compte tenu de la forme des ouvertures.

³² Konecny 1994.

³³ Borchhardt 1975, 49 note que les fortifications extra-urbaines du territoire de Myra étaient des résidences fortifiées. Lawrence 1979, 179 et 410 rapporte que les forts du territoire de Myra, en particulier celui de Beymelek, étaient des palais fortifiés à l'intérieur desquels résidaient des potentats locaux qui devaient maintenir les populations rurales sous leur contrôle. Voir aussi Borchhardt & Dobesch 1993, 53-4 ; Zimmerman 1992, 112-3.

dans leur style de construction, sont très proches par exemple des tours de flanquement d'Héraclée du Latmos en Carie (tours de la section est de l'enceinte).³⁴

Considérant tous ces éléments, nous pensons que ces forts avaient une fonction de garde et d'observation, qu'ils étaient destinés à la défense de la ville et du territoire environnant. Ils étaient probablement occupés par des garnisons permanentes, comme en témoignent les citernes situées à l'intérieur des édifices mais aussi les tombes simples aménagées dans le roc – pratiques que l'on retrouve dans beaucoup de forteresses connues pour avoir été tenues par des soldats étrangers. Nous pensons notamment au Tekke Kale près d'Amyzon.³⁵ Qu'il ait existé des structures agricoles à proximité (notamment des pressoirs à olives) n'enlève rien à leur fonction militaire ; en effet, les garnisons pouvaient générer, par leurs besoins quotidiens en vivres, une polarisation commerciale, une concentration relative de richesses et, par conséquent, un développement de l'économie rurale.³⁶

En conclusion, nous voudrions porter notre attention sur trois points : d'abord sur l'établissement d'un réseau défensif, ensuite sur l'emploi de techniques de construction spécifiques, enfin sur la défense de la Lycie au temps de l'affirmation des grandes monarchies hellénistiques.

Les forts de l'arrière-pays datent tous de la période hellénistique. En effet, leurs dispositifs tactiques (multiplication des fenêtres et des meurtrières, aménagement à trois niveaux), autant que leur style de construction (bossage, ciselures d'angle, appareil rectangulaire à carreaux et boutisses, emboîtements) plaident en faveur d'une date comprise entre le III^e et le I^{er} siècle av. J.-C.³⁷ Sont-ils le résultat d'une même campagne de construction ? Le fort « ouest » offre de nombreuses ressemblances dans le traitement des

faces de parement avec la tour isolée d'Andriaké ainsi qu'avec le mur de la ville basse de Myra ; on retrouve notamment les hachures en bordure des joints. Le fort « est » ainsi que le fort de Beymelek (Ision ?) en sont dépourvus, mais présentent en revanche le même mode d'appareillage. Ces éléments de comparaison suggèrent une certaine contemporanéité, sinon un cadre chronologique relativement réduit ; ils nous conduisent par ailleurs à nous demander s'il existait une relation de complémentarité entre ces forts et les autres fortifications du territoire de Myra.

Le fort « ouest » fut construit à 1,5 km de l'acropole fortifiée de Myra, qui devait être visible depuis le premier étage ; en revanche, il n'était pas visible depuis l'acropole du fait de la situation de celle-ci, en contrebas (Fig. 1) ; on peut supposer, par conséquent, qu'il existait des stations relais entre ces deux points. Le fort « ouest » pouvait aussi communiquer avec les fortifications portuaires, en particulier avec la tour isolée. Il en était de même du fort « est » qui, par ailleurs, disposait d'une vue sur l'acropole et pouvait, au moyen de signaux de feu, communiquer avec le fort de Beymelek, qui devait vraisemblablement marquer la limite orientale du territoire de Myra. Tous étaient occupés par une garnison permanente, comme en témoignent les tombes et les citernes mises au jour sur les sites de chacun d'eux. À qui servait ce réseau défensif ? À la cité probablement,³⁸ mais aussi aux rois dans la sphère d'influence desquels celle-ci se trouvait incluse. Un tel réseau n'est pas si fréquent en Asie Mineure ; il rappelle, par sa densité, celui que l'on peut observer autour du sanctuaire de Labraunda ou, à une échelle plus large, dans le nord de la Carie.³⁹ Il ne fait aucun doute que dans le cas de Myra, ce fut un pouvoir dominant extérieur qui en fut à l'origine.

Des caractéristiques du décor architectural ont été mises en relation avec les Lagides. Il s'agit d'abord de la *cyma reversa* ou *kymation*. Ce type de moulure est présent dans

³⁴ Sur Héraclée du Latmos, voir Adam 1982, 110–1 et 239 ; Pimouguet-Pédarros 2000, 356–8.

³⁵ Pimouguet-Pédarros 2000, 84–8 et 127.

³⁶ Pimouguet-Pédarros 2006. Sur les aspects économiques et sociaux d'une garnison : Chaniotis 2002 ; Ma 2002.

³⁷ McNicoll 1997, 171–2 et 174 date le fort « ouest » de la fin de la période hellénistique sans fournir de datation plus précise. Pour le fort de Beymelek, il suggère le II^e siècle av. J.-C. en raison de la présence de nombreuses meurtrières qu'il identifie à des « scorpions-slots ». Cela ne constitue pas, nous semble-t-il, une indication en faveur de cette date dans la mesure où l'existence de scorpions est attestée dès la fin du IV^e siècle. Voir *IG* II, 1627b l. 328–36 ; 1628d l. 510–5 ; 1629e l. 985–90 ; 1631b l. 220–4. Voir aussi *RE* 50 (1907) s.v. « Skorpion » 584–7 (Lammert) ; Marsden 1969, 60–1 ; Garlan 1974, 217–8, 220 et 223. L'aménagement de petites fenêtres de tir adaptées à l'usage des scorpions est attesté en 213 à Syracuse, à la suite de la reconstruction de la muraille par Archimède, voir *TLG* 24.34.9.

³⁸ Sachant que la piraterie et le brigandage étaient bien présents dans la région, en particulier aux époques hellénistique et romaine du fait du développement commercial de la cité, on peut supposer que les coups de main ne concernèrent pas seulement les navires cargos aux abords du port, mais également les petites vallées côtières mises en culture, sur lesquelles il était possible de limiter les ravages par la construction de forts en position dominante. Sur la piraterie hellénistique : de Souza 1999. Sur les opérations de brigandage des populations des hautes terres, voir *RE* 13.2 (1997) s.v. « Lykia », 2274–5 (Ruge).

³⁹ Pimouguet-Pédarros 2000, 302–14.

les temples érigés sous les Ptolémées, en Egypte ainsi que dans les possessions extérieures.⁴⁰ Or, on retrouve le même profil dans les corniches qui soutiennent les planchers des forts du territoire de Myra. Faut-il y voir un emprunt et, avec lui, la transformation d'un motif décoratif en un motif purement fonctionnel ? La question est ouverte. Il s'agit ensuite des stries bordant les joints sur les faces de parement ; elles sont le résultat d'une taille rapide des arêtes du bloc au moyen d'une broche et non, comme à l'ordinaire, au moyen d'un ciseau – le recours à la broche plutôt qu'au ciseau pouvant se justifier par la nature de la pierre, dure ou abrasive. Mais par-delà ces considérations d'ordre technique, il est à noter qu'en Carie comme en Lycie, ce type de traces n'est présent que sur des sites fortifiés connus pour avoir été dominés par les Ptolémées.⁴¹ Faut-il en déduire que ce mode de traitement des faces de blocs fut introduit dans le sud-ouest de l'Asie Mineure par l'intermédiaire d'ouvriers au service de la royauté lagide ? À Xanthos, les fouilles ont montré que la tour de flanquement, à l'est, composée d'un appareil polygonal à bossages et de ciselures brochées, fut construite au II^e siècle av. J.-C., de même qu'une importante section du rempart oriental. Il s'agirait d'une réfection effectuée au moment où la cité devint indépendante. Or, on pensait jusque-là que ce secteur remontait au temps de la domination lagide, soit au III^e siècle av. J.-C., par comparaison avec le fort de Kydna daté de cette époque.⁴² Nous avons donc la preuve que le traitement des joints à la broche, s'il existait sous les Lagides, resta en usage bien après chez les tailleurs de pierre de Lycie.

Ce qui est certain, c'est qu'à partir de la fin du IV^e siècle av. J.-C., la Lycie fut disputée entre les souverains lagides et antigonides. La période de domination antigonide sur la cité dura environ dix-huit ans. Ce furent des années troublées marquées en Asie Mineure méridionale par le conflit opposant Antigone et Ptolémée, chacun voulant prendre le contrôle des principales bases maritimes de la région. Lors du siège de Rhodes, en 305–304, Démétrios était maître de Patara, ce qui laisse penser qu'il tenait aussi la cité voisine de Myra, et en particulier son port, Andriaké.⁴³ Il est probable que les Antigonides fortifièrent

la colline d'Ince Burun afin de protéger le port. Vers 280, la cité passa sous contrôle ptolémaïque pour une période de plus de quatre-vingts ans, certainement propice à de nouveaux aménagements défensifs.⁴⁴ Si le rempart existait déjà sur le sommet de la colline, il faut admettre que les Lagides se contentèrent d'en prendre possession, faisant peut-être construire la tour isolée et mettant en chantier une série d'ouvrages fortifiés dans l'arrière-pays en vue de doter la ville et son territoire d'un véritable réseau défensif. Que la cité de Xanthos ait mis en chantier au II^e siècle av. J.-C. un important programme de défense consistant à construire un fort près de la mer (Kydna) et à renforcer ses fortifications urbaines,⁴⁵ n'implique pas qu'il en fut de même à Myra ; compte tenu de la situation géostratégique de la cité, il est difficile de croire qu'elle ait été dépourvue au temps de la domination lagide, voire déjà sous les Antigonides, de fortifications portuaires, et que l'arrière-pays n'ait pas été solidement tenu afin d'assurer la défense d'une partie de la Lycie.

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⁴⁰ McNicoll & Winikoff 1983, 323 notent à propos du fort de Beymelek la présence du *cavetto* ou *cyma reversa* et fournissent plusieurs exemples d'utilisation de ce corps de moulures dans l'architecture religieuse égyptienne, supposant un traitement idiosyncratique de ce type de profil.

⁴¹ En Carie, ce type de traces n'est présent qu'à Caunos (section G-H du long mur : appareil polygonal) et à Xystis (forteresse supérieure : appareil polygonal à bossages et ciselures brochées), voir Pimouguet-Pédarros 2000, 97, 250–2, 372 et 378. En Lycie, les exemples les plus significatifs se trouvent à Kydna et à Xanthos. Sur les fortifications de Kydna : Adam 1982, 123–65 ; sur celles de Xanthos : des Courtils 1994, pl. 60 fig. 169 (mur hellénistique sur l'acropole).

⁴² Sur la datation du mur est de Xanthos : des Courtils 1994, fig. 3. Sur Kydna et ses parallèles avec Xanthos : Adam 1982, 123.

⁴³ Diod. 20.93.3 ; Pimouguet-Pédarros 2011, 71–9.

⁴⁴ Pimouguet-Pédarros 2013.

⁴⁵ des Courtils 1994, 289.

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THE ATHENIAN WALLS IN THE 1ST CENTURY BC

Caterina Parigi

Abstract

At the beginning of the 1st century BC Athens had a solid system of fortification, to which the restorations undergone during the 2nd century BC had contributed. The enceinte was made of three different elements: a wall, a pre-wall (so-called *proteichisma*), and a moat. During the 1st century BC the status of the fortification changes mainly because of two events: Sulla's and Calenus's sieges. The analysis of literary sources (Appian and Plutarch) and archaeological evidence shows that after Sulla's siege, the walls of Athens had differing degrees of damage at various stretches of their outer edge. No area, however, seems to have been completely destroyed. After the siege the walls, according to the literary, epigraphic and archaeological sources, were restored in the stretches with greater damage and they could perform their defensive role against Calenus, in 48 BC. After this second siege the fortifications gradually lost their defensive function, reflecting a phenomenon observed not only in Athens but all over Greece at the beginning of the Roman period. The moat was gradually abandoned, started to fill in and was no longer cared for; the *proteichisma* collapsed inside the moat and the wall was in ruins, remaining, however, in part visible, since the Valerian wall was constructed directly above the older ones. The fortification, in part physically and in part functionally, continued to separate the city and the suburb. This is also demonstrated through the continuous use of the cemeteries.

The Athenian walls at the beginning of the 1st century BC

At the beginning of the 1st century BC, Athens had a solid system of fortification made of three different elements: a wall, a pre-wall (*proteichisma*) and a moat (Fig. 1). The wall, dated in its first phase to the Themistoclean age, was constructed with a base of two stone faces of ashlar conglomerate stones, sometimes supplemented by limestone, in alternating courses of headers and

stretchers, set in isodomic masonry. The upper part was made of sun-dried bricks.¹ The wall has been preserved in many parts of the city with a width that ranges from 2.00 m to 4.50 m, and at the beginning of the 1st century BC had undergone several restorations dated to various periods including the 2nd century BC. This latest restoration can be seen in some areas of the city, was noted by epigraphic sources and probably provided an initial defence against Sulla's Roman troops.²

¹ Travlos 1971, 158–9; Theodoraki 2011, 138–9. Some Hellenistic stretches were constructed in compartments and in some cases the construction was all stone.

² See Theodoraki 2011, 127–8.

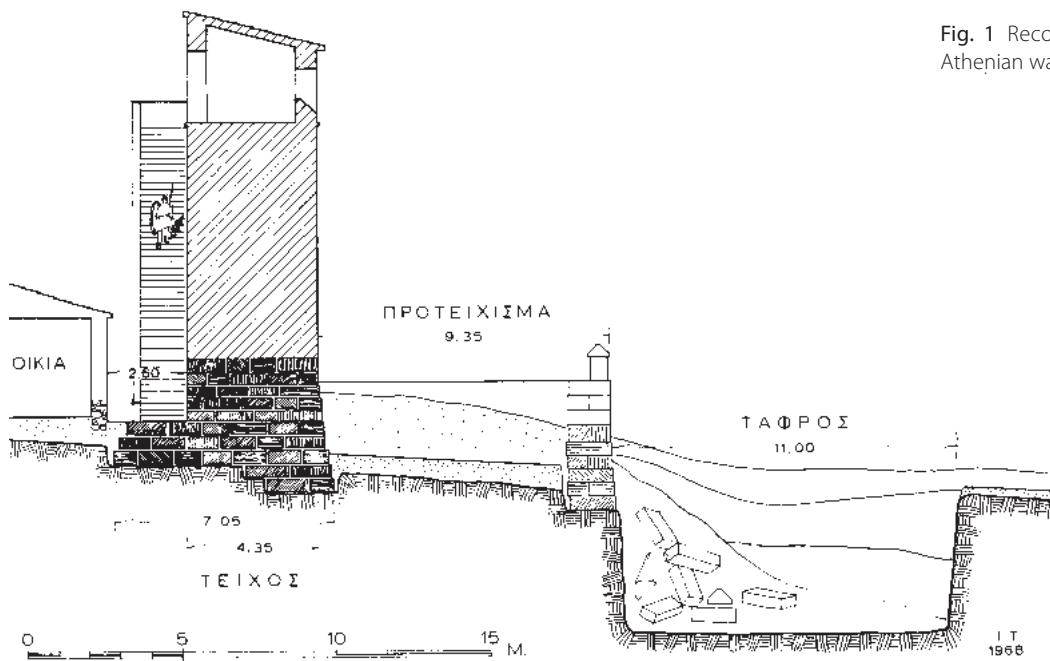


Fig. 1 Reconstructive sketch of the Athenian walls (Travlos 1971, fig. 228).

The pre-wall, or *proteichisma*, was built in the second half of the 4th century BC along the line of fortifications, parallel to and on the outside of the wall. It ran from the north slope of the Hill of the Nymphs to the south slope of the Hill of Philopappos, except for the south-western area of the city that lies between the two heights.³ This wall was constructed entirely of stone, mainly of conglomerate blocks, but also of supplementary materials such as poros stones or re-used architectural fragments. It had a width of between 1.10 m and 2.50 m and was located at a distance of approximately 8–10 m from the main wall. The *proteichisma* often had additional buttresses along the inner side that were positioned at unequal intervals, and also functioned as a support for the ring road that ran along the whole outer edge of the fortifications between the wall and the *proteichisma* itself.

Immediately outside the *proteichisma* was the moat, and like the *proteichisma*, it ran along the entire line of fortification except for the area between the Hill of the Nymphs to the north, and the Hill of Philopappos to the south. It has been preserved in many parts of the city and is dated to the second half of the 4th century BC.⁴ The moat ranged in width from 8 m to 12.50 m and in depth from 3.20 m to 11 m depending on the configuration



Fig. 2 Remains of the fortification at the intersection of Odos Aioulou 82–84 and Odos Sophokleous. *Proteichisma*, retaining wall of the moat and moat (Theocharakis 2011, fig. 43).

³ Travlos 1971, 158–9; Theocharakis 2011, 144. For the earliest stretch of the *proteichisma*, recovered in front of the western tower of the Dipylon Gate and dated to the second half of the 5th century BC, see Gruben 1969, 34.

⁴ Travlos 1960, 76–8; Travlos 1971, 158–9; Theocharakis 2011, 144. For some trenches of the moat, assigned to earlier dates – immediately prior to the outbreak of the Peloponnesian War, during its early years, or after 426 BC, see Knigge 1974, 188.

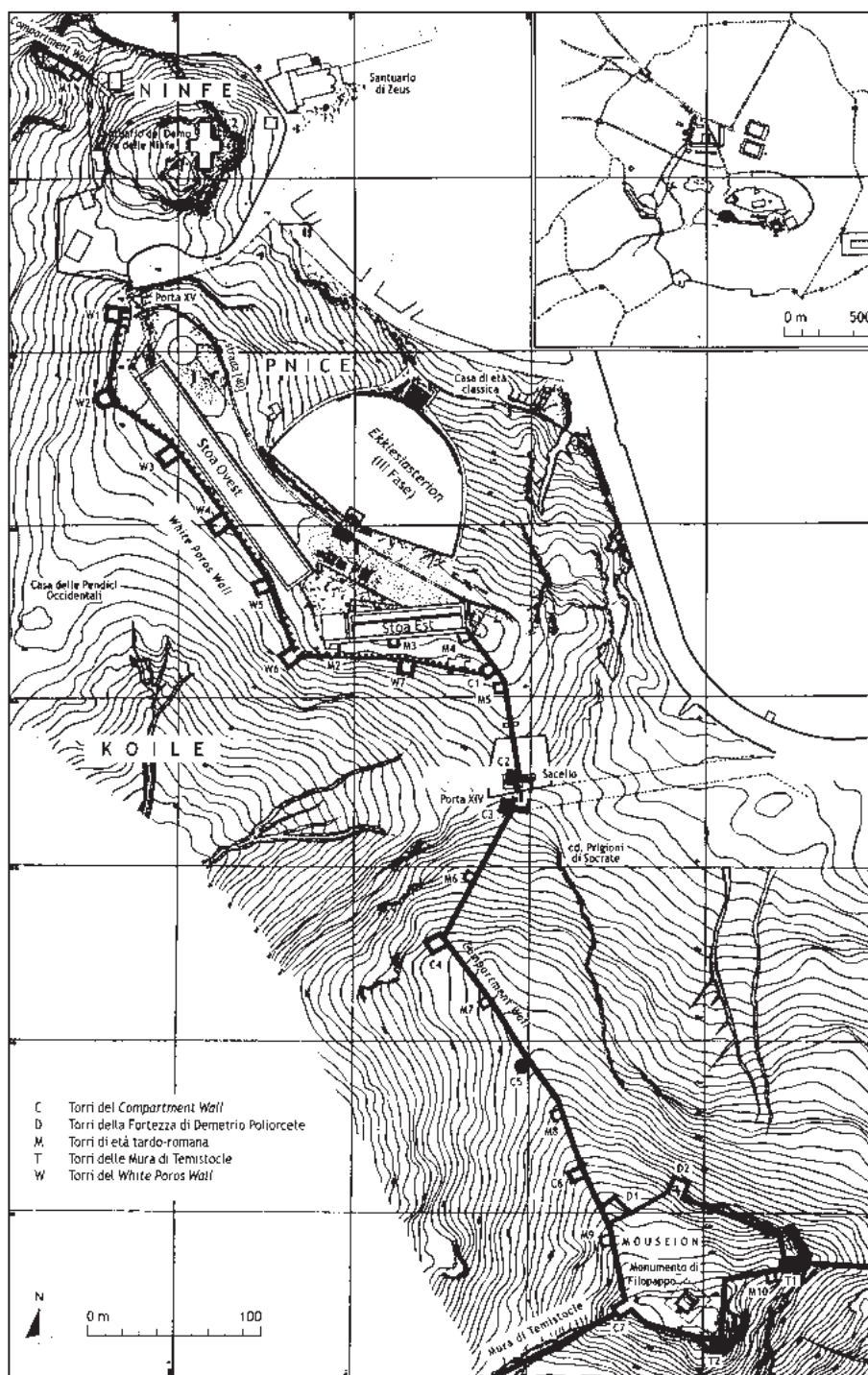


Fig. 3 The fortification on the south-western hills: Compartment Wall and White Poros Wall (Greco 2011, fig. 161).

of the ground and the hardness of the rock. The moat was made of retaining walls, solidly constructed in ashlar masonry, which ran in two directions: parallel to the *proteichisma*, on the outer side of the trench, or

perpendicular to the *proteichisma*. The second category has been preserved near the city gates, where the moat broke off to leave space for the streets that led to the city gates (Fig. 2).⁵

⁵ Theocharakis 2011, 144–6.



Fig. 4 Plan of the fortification between the Dipylon and the Piraic Gates (Ficuciello 2008, fig. 66).

In south-western part of the city, where the hills of the Nymphs, Pnyx, and Philopappos are situated, the state of the walls was different. Here, indeed, archaeological excavation showed the presence of two different walls: the so-called Compartment Wall and the so-called White Poros Wall (Fig. 3).⁶ The first one, dated to the second quarter of the 3rd century BC, ran from the bottom of the Hill of Pnyx to the Hill of Philopappos, where it joined the Themistoclean wall.⁷ The second one, dated to the second quarter of the 2nd century BC, was made of poros blocks and was constructed on the Hill of Pnyx only some metres west of the older Compartment wall.⁸ In the 2nd century BC, besides the construction of the new parts of the wall, some restoration work was carried out on the old structures in order to make them functional again. At the beginning of the 1st century BC, this place was

protected with a wall, but there was neither a *proteichisma* nor a moat.

Immediately before Sulla's siege of the city, a modification was made to the Dipylon Gate in order to reduce the space for passage on the outer side: a cross wall was positioned that divided the width of the entrance into two smaller doors and closed the inner court of the gate, creating a space like a cage (Fig. 4).⁹ This wall was apparently made hastily with the use of spolia collected from different places and was set without mortar.

Thus was the state of the Athenian walls at the beginning of the 1st century BC and during Sulla's siege, which occurred in 86 BC. This siege was the first, the most important and the most well-documented event that had an impact on the city walls during the 1st century BC. Through the analysis of literary sources and archaeological records we will see how the siege affected the state of the Athenian walls and which data can be derived.

THE LITERARY SOURCES

Two main literary sources tell us about the siege: Plutarch in *The Life of Sulla* (chapters 12–15) and Appian in the twelfth book of Roman history, which is dedicated precisely to the wars of Mithridates. With regard to the walls, Plutarch tells us that Sulla heard some elders complaining that the tyrant (Aristion) did not guard the approaches to the wall at the Heptachalkon, and had identified this place as the most vulnerable stretch of the wall circuit, the only one from which it was possible to get in.¹⁰ Therefore, after razing to the ground and levelling the part of the wall that stood between the Sacred and the Piraic Gates, he was able to enter the city from that point. This passage directs us to a specific area of the city, where, in fact, there are the two gates mentioned by Plutarch, at the north-western side of the city walls. Giving credence to Plutarch's account, it appears that the weaknesses of the walls in this area were caused by the scanty or complete lack of protection that Aristion had dedicated to this area, and not, as has been argued by some scholars, from the lack of a ditch and a *proteichisma* at this point.¹¹ The archaeological excavations at Odos Erysichthonos for example have,

⁶ Marchiandi 2011a, 327–31.

⁷ The archaeological excavation also reveals the northernmost stretch of the Compartment Wall, which extends to the north-west spur of the Hill of the Nymphs, see Thompson & Scranton 1943, 303.

⁸ On the date, see Thompson & Scranton 1943, 358–62; Conwell 2008, 193–4.

⁹ Gruben 1964, 390, 419.

¹⁰ Plut. *Sull.* 14.1–5.

¹¹ Tsirigoti-Drakotou 2000, 89.

indeed, revealed the presence of both the *proteichisma* and the moat.¹²

Plutarch's perspective may also be confirmed with respect to three aspects of the evidence that can be obtained from other sources: the positioning of Sulla's camp at Eleusis north-west of Athens, the cutting of wood in the Academy, which is located precisely on the road to Eleusis leading to the Dipylon Gate, and thirdly, the carrying out of a part of the battle in the area of inner Kerameikos.¹³ All these reports indicate Sulla's progressive approach to Athens from the north-west, and draw attention to the part of the fortification which should have corresponded then to the area of the walls most affected by the destruction. The exact placement of the point where the Romans entered the city is uncertain, however, since it depends on the identification of the Heptachalkon. Locating the area, indeed, is not easy, particularly when the researchers' interpretation of the name itself creates ambiguity. As far as this is concerned, there are different hypotheses: the name could derive from seven bronze plates, seven coins, or, perhaps, from the presence of the heroön of Chalkodon, a Euboean hero, mentioned by Plutarch in the *Life of Theseus*.¹⁴ Topographically, the area is commonly identified as the Athenian district which was around the Piraic Gate (Fig. 4). Perhaps it is possible to identify the heroön by way of scanty archaeological remains consisting of bedrock outcrops, located at the intersection of the modern Eptahalkou and Efestion roads, into which ancient niches and beam emplacements are carved; but here also the identification cannot be certain.¹⁵

The other available source, Appian, describes the various phases of the war in detail, but he does not provide any indication regarding the city walls and the point where Sulla entered. He only mentions that once Sulla had dug a moat around the city, he began to break through the walls.¹⁶

Both Appian and Strabon refer, however, to the destruction of the Long Walls, a subject upon which it is not possible to dwell here.¹⁷

Given the written sources' focus on information about the destruction of the walls in the western part of the city, it is important to examine what evidence can be derived from the archaeological remains themselves.

THE ARCHAEOLOGICAL REMAINS

Analysis of the portions of the walls found in Athens permits us to glimpse at a more complex situation than that outlined by Appian and Plutarch. The remains linked to the destruction that can be associated with Sulla's siege of the city are indeed very few and have been located in parts of the walls not mentioned by the sources: in the north-west and in the south.

In the first instance, the excavation at Odos Dipylou 5-7-9, just north-east of the Dipylon Gate, that is to the north of the area mentioned by Plutarch, has brought to light evidence of the destruction of two stone courses in the wall which are assigned to Sulla's siege (Fig. 5, no. 1 and Fig. 6).¹⁸

In the southern part, however, an excavation carried out to the south of the Acropolis metro station showed traces of destruction of the walls and of the Alade Gate, at which the road from Falero entered the city. These are attributed, according to the pottery finds, to Sulla's siege (Fig. 5, no. 2).¹⁹

The correspondence, therefore, of archaeological and literary evidence shows that it is necessary to pay attention to the whole outer edge of the enceinte, and broaden the horizon on the siege's impact on the walls themselves; the latter were obviously subjected to damage not only in the western area between the Sacred and the Piraic Gates, but also in other stretches, as shown clearly by the evidence obtained from both the archaeological excavations. The confirmation of destruction in the area north of the Dipylon Gate could be associated with the fact that, most likely, the gate had withstood the attack, perhaps thanks to the reinforcement made shortly before the siege, and that

¹² Chatzipouliou 1991, 31.

¹³ Plut. *Sull.* 12.4; 14.6; App. *Mith.* 12.5.30, 33; Paus. 1.20.6.

¹⁴ Plut. *Thes.* 27.

¹⁵ Hoff 1997, 36, notes 18-19.

¹⁶ App. *Mith.* 12.6.38.

¹⁷ App. *Mith.* 12.6.40-1; Strab. 9.1.15.

¹⁸ Spathari 1980, 34-6.

¹⁹ Kalligas 2000, 34-5.

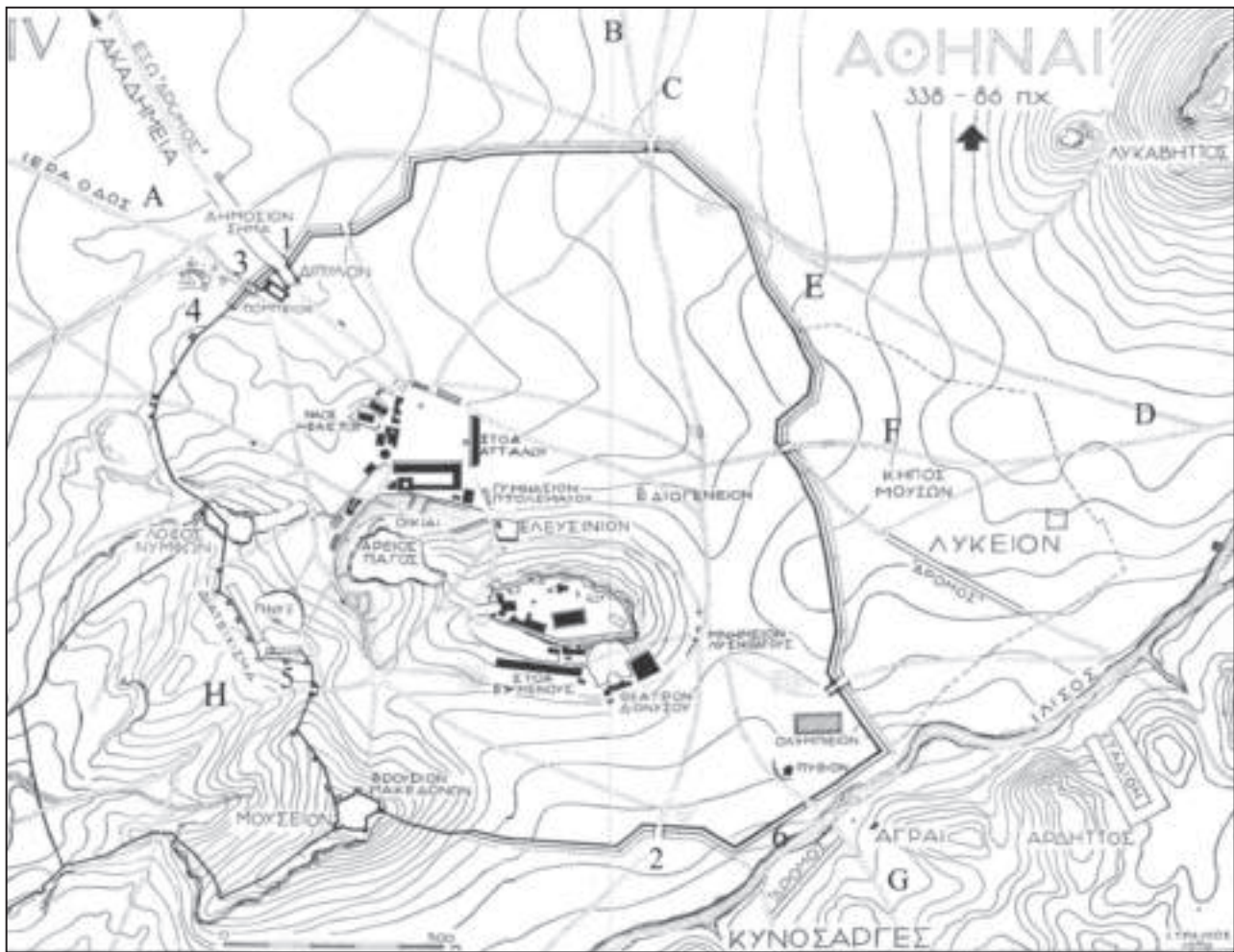


Fig. 5 Plan of Athens (Travlos 1960, table 4, author's new elaboration).



Fig. 6 Themistoclean wall at Odos Dipylou 5-7-9 with evidence of destruction at centre (Theocharaki 2011, fig. 33).

for this reason Sulla's troops were forced to enter the city south and north of this gate.

A further element revealed by archaeological excavation, in contrast to what was handed down by Plutarch (i.e. the complete destruction of the wall between the Sacred and the Piraic Gates), is the presence of remains of the enceinte in the north-western area of the city, dating to before the siege. The archaeological research at the Kerameikos has, indeed, brought to light the remains of the wall in its different phases, Themistoclean, Kononian and Demosthenian, in the area just south of the Sacred Gate (Fig. 7).²⁰ This evidence would not have been recovered if the wall had been razed to the ground during the siege. The Piraic Gate itself, along with a stretch of the

²⁰ Noack 1907a, 127-38; Noack 1907b, 499; Ohly 1965, 360-76.



Fig. 7 Remains of the wall south-west of the Sacred Gate: 1. Themistoclean stone base, 2–3. Kononian stone base and mud brick, 4. Demosthenian mud brick (Ohly 1965, fig. 51).

wall, was identified in excavations at Odos Erysichthonos 15 in 1965 and Odos Irakleidon 50 in 1982.²¹

From the analysis of these records, therefore, it can be concluded that after Sulla's siege the walls of Athens had damage of various degrees at some points of their outer edge. No area, however, on the basis of the surviving remains seems to have been completely destroyed.

The situation of the walls after Sulla's siege

The most deeply rooted hypothesis among scholars studying this period argues that after Sulla's siege the walls were fundamentally damaged and were left in a state of disrepair that caused the walls' slow decline and ultimate destruction. It has also been claimed that Athens was without fortification walls from the period immediately after 86 BC until the middle of the 3rd century AD, when a new enceinte was built by the emperor Valerian.²² This view contrasts, in my opinion, with the textual and archaeological evidence that we have. The literary and epigraphic sources and the data obtained from archaeological excavations tell us

about a different situation that shows the presence of a fortification wall at Athens at least until the middle of the 1st century BC, as confirmed by a series of restorations on the areas damaged by Sulla's siege. The subsequent abandonment of the defence system, to which the collapse of the *proteichisma* and the subsequent filling of the ditch attest, as has been confirmed by several excavations, should, in my view, be placed slightly later, according to a phenomenon observed in many Greek cities at the beginning of the Roman period.²³

THE LITERARY SOURCES

The main literary source that we have to consider for this period is Cassius Dio, who handed down the news that Calenus, Caesar's general, was not able to take Athens in 48 BC, during the war against Pompey. Instead he caused a lot of damage to surrounding areas of the city and managed to take Piraeus, because of its lack of fortification.²⁴ This event appears to show the presence of an enceinte at Athens, otherwise Calenus's inability to take a city, which, as is widely held, had a ruined or completely destroyed fortification wall, cannot be explained.

Another source that we can consider is Vitruvius. In his *De Architectura* the architect discusses the use of sun-dried bricks as a building material and includes the walls of Athens which face Mounts Hymettos and Pentelikon in his examples.²⁵ Scholars disagree on the interpretation of the passage; Corso, for example, believes that Vitruvius is referring to the Long Walls.²⁶ I think, in accordance with Theodoraki, that the passage rather refers to the eastern and south-eastern stretches of the city walls, exactly those facing the two mountains. Since Vitruvius visited Athens around 47–46 BC, it is impossible that he is referring to parts of walls which did not actually exist at that time.²⁷

On the contrary, Zosimus, a historian of the second half of the 5th century AD, referring to the rebuilding efforts on the walls of Athens, informs us about the failure of restoration from the period after Sulla's siege.²⁸ As already suggested by Theodoraki in her research on the walls of the city, the repairs that are believed to have been made after the siege are small restorations and not

²¹ Filippaki 1966; Spathari 1982a.

²² Judeich 1931², 96; Travlos 1960, 93–4; Travlos 1971, 161.

²³ See for example the cases of Philippi and Edessa. For Philippi, see Provost 2001, 131–2; for Edessa, see Chrysostomou 1987, 161.

²⁴ Dio Cass. 42.14.1.

²⁵ Vitruv. *De Arch.* 2.8.9.

²⁶ Corso 1997, 379–80.

²⁷ Theodoraki 2011, 130. Vitruvius in his list does not mention other walls that were not standing at that time.

²⁸ Zos. 1.29.3.

a systematic rebuilding of the enceinte which is most likely what Zosimus refers to.²⁹ In addition, the historian takes into account as a cause of the abandonment of the city walls, the main event that took place in the 1st century BC, and is correct not to distinguish between an abandonment that began immediately after the siege, and another that began few decades later which was due in part to the siege itself.

THE EPIGRAPHIC SOURCES

The main epigraphic source that we have in relation to this issue is an inscription, found on the Acropolis in 1884, that reports the final part of a decree of which only the vote remains; the full text of a second decree, which records various measures taken for the implementation of a recovery and restoration programme for a number of shrines, precincts and public and sacred properties, as well as the list of these properties, which were located at Salamis, in Piraeus, near Athens and in Athens itself.³⁰ The date of the inscription is very controversial; it can be estimated between the 70s and the 50s of the 1st century BC, as suggested by Baldassarri and even earlier by von Freeden, both according to some technical elements, and according to monuments mentioned in the text, on which, however, is not possible to dwell here.³¹ This inscription contains the list of properties at Athens in need of restoration, while the ditch is mentioned at line 56. It therefore seems reasonable to suppose that this had been damaged during the siege, was restored in the year following 86 BC and then was used for defence during the subsequent siege of Calenus.

THE ARCHAEOLOGICAL RECORDS

The analysis of archaeological records highlights some restoration of the walls made after Sulla's siege which reinforces the picture offered by the literary and epigraphic sources. Starting from the north-western part of the fortification, the excavation in the Kerameikos at the Sacred Gate shows a reinforcement of the banks of the Eridanos river which corresponds to the sixth phase of the gate, dated to the 1st century BC (Fig. 5, no. 3 and Fig. 8).³² The banks of the Eridanos river were built with spolia and square blocks and are dated according to Knigge from the period after Sulla, when the city was slowly recovering from the siege and was beginning to remove traces of destruction. The river bank fortifications that were plundered were then reconstructed, and a new bridge on the Sacred Way, as well as a channel covered by amphorae and bricks along the southern side of the Sacred Way, were built.

An excavation carried out in the 1920s at Odos Erysichthonos 17, just south of the first one and exactly in the area mentioned by the sources as the most affected by the siege, brought to light a portion of the wall that had restorations carried out with a large number of re-used marbles (Fig. 5, no. 4).³³ These are mainly parts of funerary monuments: stelae, statues and bases generally dated to the Hellenistic-Roman period, which in the opinion of the excavator were used to restore the wall after the damage from Sulla's siege.³⁴

The most visible sign of restoration was found on the south-western part of the city walls. During the

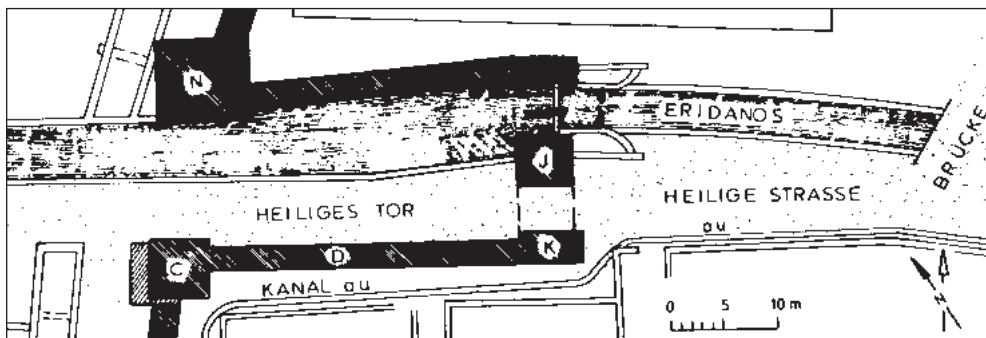


Fig. 8 Plan of the sixth phase of the Sacred Gate (Knigge 1988, fig. 54d).

²⁹ Theocharaki 2011, 130.

³⁰ *IG* II², 1035. See Tsoungas 1884, 165–72. For all the dates advanced at various times, see Culley 1975, 217.

³¹ von Freeden 1983, 157–80; Baldassarri 1998, 242–6.

³² Knigge 1988, 65–6.

³³ *Ecole Française d'Athènes* 1921, 500. The excavation is not published.

³⁴ Kastriotis 1924–5, 18–32. The published list of sculptures concerns the new acquisitions of the National Archaeological Museum of Athens in the previous three years. It is not clear which sculptures actually came from the excavation in Odos Erysichthonos.



Fig. 9 Trench north of St Demetrius Loumbardiaris from the west, showing remains of the so-called *Diateichisma* south-west of the Pnix (Thompson & Scranton 1943, fig. 24).

excavation of the so-called *Diateichisma*, in a trench north of the church of St Demetrius Loumbardiaris, a portion of the wall was found that had a row of re-used blocks, which were clearly not part of the original construction of the wall, but were the result of a restoration probably dated to the period after Sulla (Fig. 5, no. 5 and Fig. 9).³⁵ Indeed, a large pile of earth was thrown against the face of the wall, which covered these blocks. This shows that they were clearly already in place before the accumulation of earth, which is dated to the 1st century AD. According to Thompson and Scranton, we are, then, presented with a restoration carried out after Sulla's siege to repair another area of the fortifications that were damaged during the taking of the city.

Finally, another part of the defence system, which suggests the restoration of the fortification, is located in the southern part of the city, in Odos Vourvachi 5-7-9 (Fig. 5, no. 6).³⁶ The excavations revealed a portion of the *proteichisma* that had two construction phases. The second is represented by the two higher courses, built for the most part with re-used blocks of bonded cement, and is dated to when this part of the wall was rebuilt.

The *proteichisma* of the 4th century BC was used as the foundation for the new wall. In this case however, the date of the restoration cannot be estimated with certainty. The excavator dates the work to the period after Sulla's siege, but then he suggests a more precise dating after the 1st century BC.³⁷

The data from these archaeological records derive mainly from the archaeological reports published on the *Archaeologikon Deltion*. Most were collected many decades ago. As already seen, unfortunately the information is often incomplete and cannot be interpreted with absolute certainty; from the combination of this information, however, we can assume that the walls of Athens suffered damage of various degrees in different parts of the city due to Sulla's siege and that this damage was partly restored during the 1st century BC. These restorations appear not to have been on the basis of a systematic rebuilding of the city walls, but through individual and most likely temporary repairs aimed at restoring where possible the damage, mostly through the use of re-used material.

THE CEMETERIES

A final element to consider is the excavation of the cemeteries. The excavations of the main Archaic and Classical cemeteries around the city of Athens point to continuity of use until the Roman period.

Excavations carried out on several occasions and in several places at the modern Iera Odos, for example, have brought to light many tombs which are dated from the 3rd century BC to the 1st century AD, thus showing the continuous use of the cemetery, which stretched along the road to Eleusis (Fig. 5, A).³⁸

Further east, at the intersection of the modern Odos Agiou Kostandinou and Odos Geraniou in the area of Platia Omonia, a fairly recent excavation has unearthed a necropolis with 141 tombs that are dated between the 2nd century BC and the 2nd century AD (Fig. 5, B).³⁹

The excavations for the construction of the underground parking facility in the area of Plateia Kotzia and on the

³⁵ Thompson & Scranton 1943, 362.

³⁶ Alexandri 1972b, 43-7.

³⁷ I report this excavation for the sake of completeness, because it can be considered a restoration due to the destructions of Sulla's siege, but the indication of the date in the report is really unclear.

³⁸ See, for example, Lyngouri-Tolia 1985; Pariente 1992, 841.

³⁹ Kavvadias 1999, 77-80.

modern roads around the plateia revealed many graves in the same cemetery that were used from the Archaic period until the Roman period (Fig. 5, C).⁴⁰ The burials were interrupted only after the Herulians invaded Athens in AD 267, when the use of the area changed from being a place for burial to a commercial zone.

The excavations carried out during the construction of the metro stations, particularly in the eastern part of the city, have found parts of different cemeteries. The first is at Evangelismos station with 35 graves, which are dated between the 2nd century BC and the 2nd century AD (Fig. 5, D).⁴¹ The second one, near Panepistimiou station, between the modern Odos Panepistimiou and Odos Amerikis, has 209 new burials in addition to those already found in the area in 1958 (Fig. 5, E).⁴² The third is at Syntagma metro station, where the necropolis was identified that developed along the road going through the Diochares Gates, which led to the Mesogeia (Fig. 5, F).⁴³ The cemetery has graves dating from the 4th century BC to the 3rd century AD.

In the southern part of Athens, just south the Ilissos river, excavations carried out on several occasions revealed a rather extensive necropolis identified with the site of Cynosarges, which stretched along the main axis that went through the gates of Odos Vourvachi and Odos Iosif ton Rogon and led to southern Attica (Fig. 5, G).⁴⁴ Again, these burials, which began in the 6th century BC and continued without interruption until the 7th century AD, show only a slight decrease in the early Roman period between the 1st and the 2nd century AD.

Finally, an excavation in the western part of the city, between the Hill of the Pnyx and the Hill of Philopappos, has brought to light a cemetery with burials dated from the 3rd century BC, when the construction of the so-called *Diateichisma* changes the use of the place, to the late Roman period.⁴⁵

The analysis of the archaeological evidence suggests that all the main cemeteries, established outside the walls along their whole outer edge, show a continuity of use through the 1st and 2nd centuries AD and sometimes even up the late Roman period. The continuity of the cemeteries thus reflects the presence of the walls, which can be understood in a physical way, even if in ruins, or at least in relation with their value of border.⁴⁶ Their abandonment appears in this case to be linked exclusively to the defensive function itself, whose necessity and utility slowly fade in the period of the so-called *Pax Romana*. Instead, what remains unchanged is the value that the walls have as a border between the city and the area outside the city that seems to continue longer, and was reiterated in the middle of the 3rd century AD with their reconstruction by the Emperor Valerian.⁴⁷

The abandonment of the walls

As already mentioned, the most deeply rooted hypothesis among scholars considers that the walls of Athens were abandoned after Sulla's siege and that the city was therefore left without a wall until the middle of the 3rd century AD.⁴⁸ The records presented here, however, show a different picture, according to which Athens had a wall in the period after the siege.

The main factor that has been used to support the traditional thesis is the filling of the moat, which was found during excavations in many parts of the city.⁴⁹ This appeared, where it was possible to dig, fairly smooth in almost all areas, composed of earth, ash, stones, often belonging to the *proteichisma*, fragments of bricks, tiles, mortar, animal bones and sherds. According to the objects found within the fill it is commonly dated between the 1st century BC and the 1st century AD, the period in which the whole filling of the ditch and the

⁴⁰ Zachariadou & Kyriakou 1988, 23–7; Orfanou 1998, 67–8; Lyngouri-Tolia 1999, 62–3.

⁴¹ Touchais 1998, 726; Lyngouri-Tolia 2000, 212. For the excavation of the metro in general, see Parlama & Stampolidis 2000.

⁴² Hatzipoulou 2000, 225.

⁴³ Zachariadou & Kavvadias 1998, 56–7; Zachariadou 2000, 156–8.

⁴⁴ Alexandri 1972d, 93–7; Eliopoulos 2010, 85–91; Marchiandi 2011b, 506–7.

⁴⁵ Marchiandi 2011c, 353–4.

⁴⁶ This function can also be explained with the restoration of the gates, but the construction of the Valerian wall exactly above the oldest ones reflects the presence not only of the gates, but also at least of parts of the wall.

⁴⁷ As the anonymous reader suggested to me, I indicate some burials which have been found inside the wall. The presence of these burials could speak against my hypothesis, but the evidence is, in my opinion, very scanty. Only two burials have been found and they are close to the wall. The date of the burial is too general in the first case, and could be refer to the period before the siege in the second case. See Alexandri 1972c, 60; Spathari 1979.

⁴⁸ Judeich 1931², 96; Travlos 1960, 93–4; Travlos 1971, 161.

⁴⁹ Theodoraki 2011, 144.

loss of its function as a moat, and the abandonment of the walls are dated. This filling would be due to a clean up of the rubble present in the city after the destruction that occurred during the siege, undertaken by the Athenian citizens after 86 BC.⁵⁰ In this case, however, the material inside the moat should be dated for the most part to the beginning of the 1st century BC, and, instead, we are faced with very large numbers of objects dating to the 1st century AD and in some cases even up to the 2nd century AD. In some areas, much older materials were found inside the moat, dating to the 4th and 3rd centuries BC, an element that I think reflects a natural tendency to fill in the ditch.⁵¹ Furthermore, in the area previously occupied by the moat, cemeteries or buildings, both public and private, were established; this construction only occurred from the 2nd century AD onward. This probably reflects an inability to build, due to the unavailability of the area of the moat, before the 2nd century AD.⁵²

The excavations conducted by the American School of Classical Studies at Athens on the Pnyx revealed a huge accumulation of earth thrown against the outer face of the walls, dated according to the materials to the 1st century AD, which was considered by archaeologists either as a sort of ramp created to climb the walls or as part of a work aimed to put the wall out of order.⁵³ I would like to suggest, however, that in this case it is possible to consider the accumulation as part of the same phenomenon which is associated with the moat in other parts of the city, and which results in the accumulation of earth where the area is no longer maintained and the walls no longer needed to fulfil the purpose of defending the city.

The excavations also show a change in which the moat, which is only one of the three elements of the defensive system of the city, was no longer maintained, particularly in the period that we can consider as the beginning of the end of the 1st century BC. From that time the moat tends to fill in naturally and slowly goes out of order. At the same time the walls, which were damaged by Sulla's and Calenus's sieges and probably were never restored again, because that was no longer necessary, gradually lose their defensive function and are slowly abandoned.

Conclusion

In conclusion, the combination of records drawn from literary, excavation and epigraphic sources shows that it is necessary to re-evaluate the situation of the Athenian walls during the 1st century BC. First of all we see, indeed, that the impact of Sulla's siege on the walls cannot be restricted only to the north-western part of the enceinte, but it is necessary to extend our study by considering the entire wall. As we have seen, damage of different degrees has been found both through the presence of the destruction itself and through the need for a subsequent restoration at various stretches of the walls. In no case, however, are we faced with a total destruction of parts of the walls, and we need to review the concept entrenched in the previous tradition of studies according to which Athens would have been almost entirely destroyed by Sulla and his soldiers and would have existed for almost three centuries without walls.

After the siege Cassius Dio's account, and the epigraphic and archaeological evidence show that the walls were subject to small restorations in areas likely to be more affected and damaged by the event, and that they then perform their defensive role against Calenus shortly after the middle of the 1st century BC. At this point the walls gradually begin to lose their defensive function, which disappears with the advent of Augustus and the period of the so-called *Pax Romana*, reflecting a phenomenon observed not only in Athens but all over Greece. The moat was also gradually abandoned, as we have seen; it started to fill in and was no longer cared for; the *proteichisma* collapsed inside the moat and the wall was in ruins, remaining, however, in part visible, since the Valerian wall was constructed directly above the older ones. The examination of the evidence gathered regarding the fortification of Athens shows that the wall, though it underwent major structural changes, retained its role of providing separation between the city and the suburbs; the continuous use of the cemeteries can only add to the viability of this thesis.

⁵⁰ Threpsiades 1950, 74; Travlos 1960, 93; Spathari 1980, 36; Tsirigoti-Drakotou 2000, 89.

⁵¹ Spathari 1982b; Tsouklidou-Penna 1982, 23; Lyngouri-Tolia 1990, 39.

⁵² See for example Alexandri 1972a, 41.

⁵³ Thompson & Scranton 1943, 362–6.

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THE LATE ROMAN CITY WALL OF RESAFA/SERGIUPOLIS (SYRIA): ITS EVOLUTION AND FUNCTIONAL TRANSITION FROM REPRESENTATIVE OVER PROTECTIVE TO CONCEALING

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Abstract

The development of the city wall of Resafa/Sergiupolis, from its complete renewal at the beginning of the 6th century up to its revitalization in the 8th century, is traced. Five building stages are distinguished and these imply multiple transformations in function. The phases are presented in their historical context and a glance at certain other places of the region reveals parallels to those structures and the traditions forming them. The first stage begins at the turn of the 5th to the 6th century, when the plan for a new city wall had come into effect and its first two sections started to rise. Beginning in times of lasting peace and prosperity the idea was to create a lavish imposing edifice. Focusing on a representative appearance, labour-intensive elements were introduced in the construction and at the same time, important defensive features were neglected. The next three stages cover the painful struggle for completion. After the Roman-Persian war had broken out in AD 502, armament had to be improved and concessions in concept and construction increased. Consideration of Amida, Dara-Anastasiupolis and Zenobia help to understand this development. The blocking of the gates and the banking up of the ramparts mark the last stage. These measures produced an impenetrable enclosure and obviously these structures never were intentionally disassembled. Possibly the intention in early Islamic times was to define a protected holy ḥaram area next to the caliph's spacious residence outside the walls.

Framework

Of all the late Roman fortifications along the eastern Roman frontier, the auxiliary fort of Resafa experienced an exceptional urban development from the 5th to

8th centuries AD. Despite its unfavourable location at the desert's fringe, the settlement grew and its wealth increased. Because the memorial site of the martyr Sergios stood at the crossroads of major trade routes it was a focus for pilgrims as well as merchants passing

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through. A long span of relative peace in the 5th century allowed Sergiupolis, as the city was named in early Christian times, to flourish.

The first city wall protecting the *vicus* was made of mud brick¹ and was later replaced by the sumptuous structure (Fig. 1) whose substantial remains still stand today. When it comes to this city wall of Resafa, written sources are few and far between. A short note by Procopius (*Aed.* II.9.6) claims that Justinian I (r. 527–65) built this ‘most remarkable wall’. Yet, the sum of research at Resafa has revealed that the construction of the wall dates to the reign of Anastasius I (r. 491–518),² and the work probably commenced close to the year 500.³

The ruin of the city wall is still an impressive landmark today, even though the ground level is completely covered by about five metres of sand and debris and the upper parts have deteriorated. Its most characteristic feature is the galleried wall-walk seemingly running around the entire enclosure. A glance at the remains of the west gate blended into the reconstruction model (Fig. 2) gives a good idea of the original structure, with its galleried wall-walk, towers, staircases and gateways, in relation to the current state of the monument. The 1.8 km long city wall of Resafa is roughly rectangular in plan. Its four main gates are flanked by close standing towers. These towers belong to an overall system of 50 towers, among which 29 large towers alternate with 21 turrets.

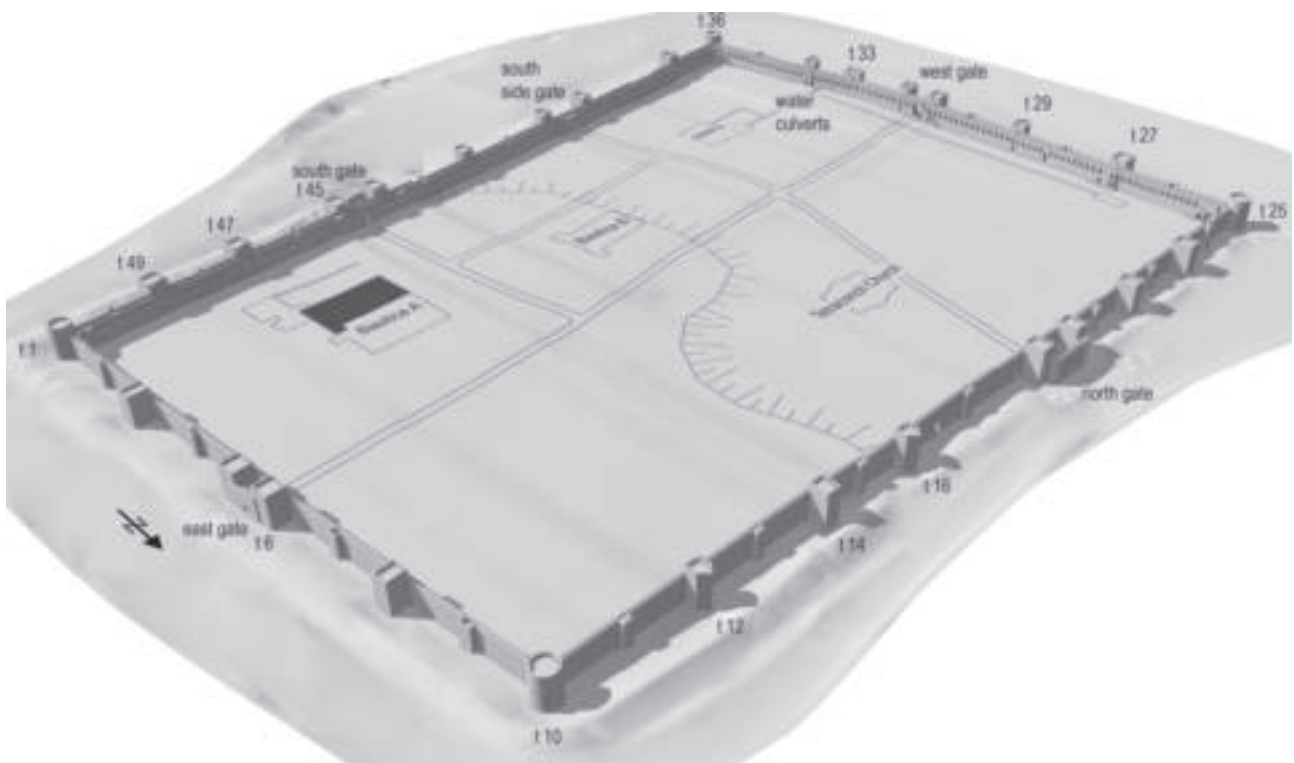


Fig. 1 Resafa, city wall, reconstruction model. Basilica A (solid filled area) was already in existence. Basilica A Annexes, Cisterns, Basilica B and Tetraconch Church (outlined areas) were probably under construction as the city wall was just about finished (N. Erbe & C. Hof).

¹ Konrad 1992, 343–50; Konrad 1999, 404; Konrad 2001, 14–15.

² Gunnar Brands (2002, 6, 197, 595) has shown that the north gate of the city wall, the Tetraconch Church and Basilica B (its beginning dated by inscription to 518) were erected in close sequence.

³ Some aspects of our current understanding of when and how the city wall of Resafa came into being and of some of its structural peculiarities are presented in Hof 2009; Hof 2010; Hof 2012. The city wall defined the emergence of the city to a high degree, yet can only be understood thoroughly when seen together with the historical development of the settlement as a whole. The Resafa-Project is compiling a ‘chronological plan’ for Resafa that will be presented in *Resafa 8*. Seasonal reports are published within the *Annual of the Masterstudium Denkmalpflege der Technischen Universität Berlin*. Some preliminary results in, for example, Sack *et al.* 2010.



Fig. 2 Resafa, city wall, west gate. Photo (C. Hof 2009) merged with reconstruction model (N. Erbe & C. Hof).

The towers at the corners are round. Most of the others are rectangular in plan but some are polygonal and some U-shaped. The distribution of these special forms seems arbitrary, yet we can now appreciate that their peculiar arrangement is the result of a reduction in standards in the course of the building process.

The aim of this paper is to present the major building stages of the city wall of Resafa and to set these in their historical and regional context. It is only in these contexts that we can gain further understanding of the transition in function that is to be inferred from the changes in design. I will try to accomplish this broad goal by outlining the various building phases within an historical narrative.⁴ Each paragraph on a building stage first mentions the historical setting, then draws comparisons with a related site and in conclusion focuses on works at Resafa.

Stage 1: A prestigious project at the desert's fringe

After the cult of St Sergios had become popular⁵ and the basis of the city's commercial prosperity, urban

development accelerated. In its development the fort had already been violating basic principles for military posts by housing not only the horsemen of the *equites promoti indigenae*⁶ but also a growing number of civilians. A further breach of rules was the gathering of valuables within the town and it was predictable that riches would accumulate even faster after Anastasius I (r. 491–518) had cut taxes for city communities in 498.⁷ But despite thriving conditions there was something that faithful believers must truly have feared: the end of the world, which had been predicted for the year 500.⁸ And those who did not believe in the imminent apocalypse saw their goods threatened by hostile tribes, which in these times were no longer just unorganized marauding groups. The era of local tranquillity had come to an end when the Lakhmid ruler al-Nu'man II ibn al-Aswad (r. 497–503) attacked the region of Bithrapsa⁹ in 498 (Theoph. Chron. AM 5990). Luckily the attackers were driven off before actually threatening the city. Even though this incident was of minor importance for the empire, it was a decisive threat to the locals of Resafa. Now was the time to protect what the inhabitants had achieved and to convince visitors and merchants that Resafa was secure. Probably construction works on the new city wall commenced around the year 500.

At end of the 5th century, who in the region would have experience in ashlar masonry of the required dimensions? Casting around, the region of the so-called Limestone Massif about 200 km to the north-west of Resafa seems significant. Architectural ornament whose tradition derives from north-western Syria has been detected on Basilica A, the main church that predates the city wall probably only by a few years.¹⁰ Possibly there could be parallels between structural elements found at both places. The monastery of Qal'at Sim'an where, as in Resafa, a martyrium was dedicated to a local saint, was erected between 476 and 492. Both urban-based and local workshops were involved in this architectural and engineering achievement.¹¹ The Limestone Massif offers a quarriable stone that was almost exclusively used as building material, which thus shapes both the natural

⁴ A short chronicle lacks a comprehensive coherence between descriptive analysis of the given data and the representation of historical plot lines. Both will be presented in the final publication of the project's results, planned within the Series *Resafa* (Hof, forthcoming).

⁵ Fowden 1999, 67–71.

⁶ Konrad 1999, 404; Konrad 2001, 14.

⁷ Anastasius I had abolished the *chrysargyron* as part of his general financial reforms. Haarer 2006, 193–206.

⁸ Brandes 1997, 31.

⁹ Identified as Resafa. Shahîd 1989, 123; Shahîd 1995, 18 with n. 82. Supported by Fowden 1999, 61; Whitby 2000, 181, n. 138; Hof 2010, 246. Challenged by Greatrex & Lieu 2002, 51 with n. 93, 260.

¹⁰ Brands 2002, 6, 54–6. Within the broader view of the project's final publication (see note 4) a comparison with the so-called 'Anastasian Long Wall' in Thrace is planned which will rather aim at the overall design of both walls.

¹¹ Tchalenko 1953, 223–76; Strube 2002, 1, 106, 215, 225–6, 236.

and cultural landscapes of the region. The limestone for building was cut into sharp-edged geometrical units, not only ashlars, lintels, column shafts, voussoir wedges and other common forms, but also into peculiar shapes that are not so familiar in stone construction, like porthole window stones. Seemingly unique to this region, for example, are huge monolithic lintels with their bottom sides worked off in semi-circular form, resembling the arch or bridge-stones in children's wooden play blocks. Structurally the bridging stone is a straight lintel and not an arch. Monolithic arch lintels can be found on several buildings of the Qal'at Sim'ān complex: the main church (at the north-eastern corner exedra of the central court), the mortuary chapel and the baptistery (Fig. 3). Other sites in the region that show extensive use of the peculiar arch lintels are, for example, Qalb Loze (c. 470), Mushabbaq (late 5th century), Sitt er Rum (4th century) and Ḥārab Sams (4th century). In most of these cases the arch-stone is used as a window lintel and the fair faced masonry is visible in a façade in its full outline. At the baptistery of Qal'at Sim'ān it is also employed as a door or corridor lintel in an unusual way with one shoulder bonding into a transverse wall, which is exactly the exceptional form of assemblage also found in the city wall of Resafa.

The ambitious building programme for Resafa's expansion was launched with the city's major church, Basilica A.¹² The planned extension of a sumptuous new city wall around an enlarged area was intended in part to protect the new main church. When work on the wall began, most probably shortly before the turn of the 5th to the 6th century, the focus was on the representative appearance of the new city wall. Defensive aspects were certainly taken into account, yet they obviously were not predominant, as will be shown.

To accomplish the huge building programme the site was to be divided into several lots conducted by different workgroups, who would have needed instructions. But instead of preparing any kind of plans or descriptions, a prototype section of the city wall, covering the stretch from the north-eastern corner tower 10 to the polygonal tower 16, was erected by highly qualified masons to serve as a full-scale model (Fig. 4). The large towers were arranged at regular intervals (250 or 200 Byzantine feet) and the small turrets placed at mid distance between them. This additive positioning shows that the overall layout of the city wall was not yet staked out, because in the following stages the towers were spaced between a main gate and a corner. By dividing those distances



Fig. 3 Qal'at Sim'ān, baptistery with monolithic arch-stone lintels (C. Hof 2010).

¹² See note 10.

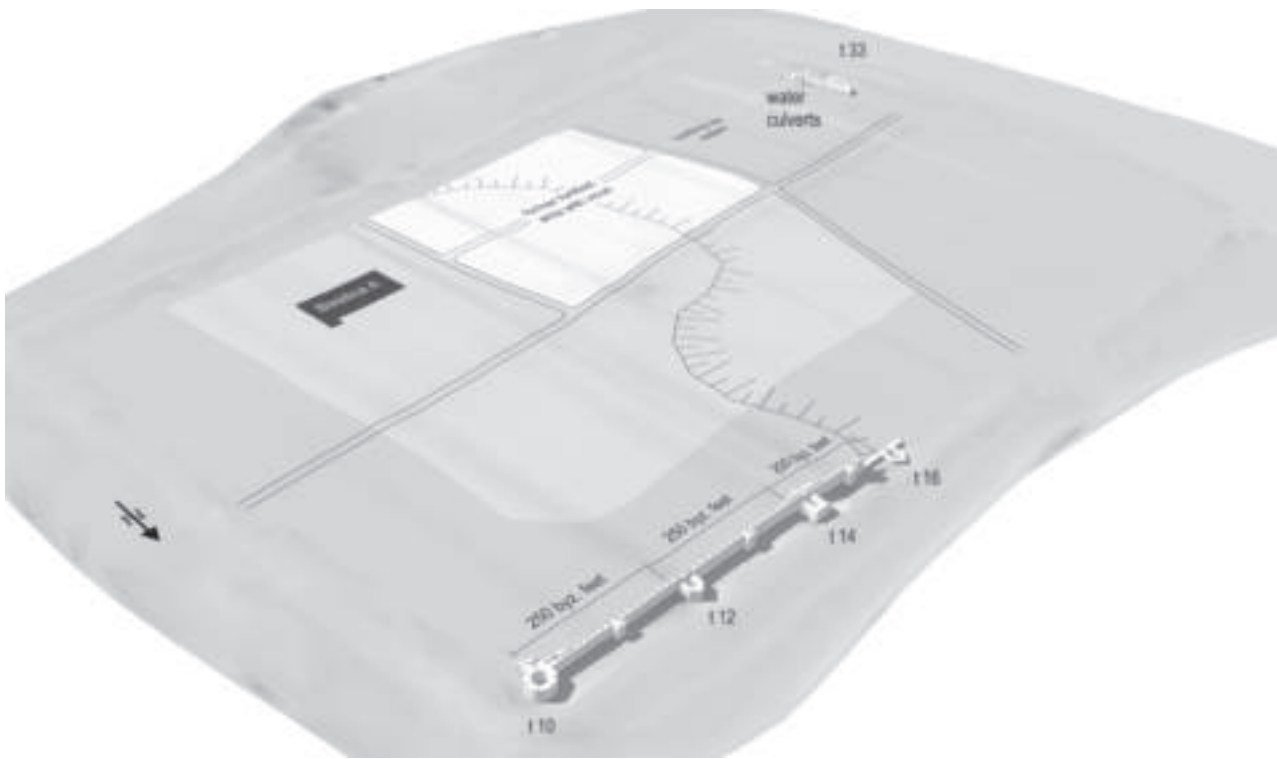


Fig. 4 Resafa, city wall, reconstruction of building stage 1. Prototype stretch of the wall (t 10–t 16) and autonomous piece (t 33–t 34) at the hydraulic installations (dam, canal, water culverts, cistern) (N. Erbe & C. Hof).

through the number of required towers the intervals between the towers result as fraction values.

The investigations of the building decorations of Resafa have revealed that the workshops employed at Basilica A probably came from north-western Syria (the Limestone Massif), whereas the gates of the city wall, the Tetraconch Church and Basilica B most certainly were built by groups coming from north Mesopotamia.¹³ During the first construction stage of the city wall, however, we can trace signs indicating that the workshops responsible for Basilica A might have been employed further. At least one of the three traceable groups working on the prototype partition came from the Limestone Massif, since they used the unusual style of monolithic arch-stone lintel described above (Fig. 5).

A second segment on the west side of the wall from tower 33 to tower 34 was also started at the very beginning of the project. It is again distinct from the (as yet undefined)

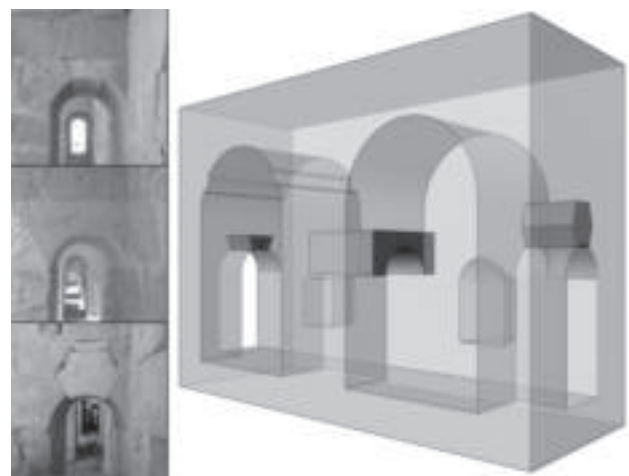


Fig. 5 Resafa, city wall, monolithic arch-stone lintel and two other key stone types to be found within different sections of the wall-walk (C. Hof).

¹³ Brands 2002, 6, 45–8, 120, 196, 227, 239, 273.

overall layout of the city wall, as is subsequently shown by its awkward, slightly offset orientation within the complete wall. This second section was not meant as a model but was part of a special hydraulic engineering project being built by separate specialists. The water culverts in this short wall stretch are of great importance for our understanding of the absolute dating of the city wall and lead us to the next stage of our analysis.

Stage 2: Outbreak of war and changes in plan

Shortly after construction works on the new formidable city wall of Resafa had begun, a devastating war between the Romans and Persians broke out. It was to be only the first in a whole series of conflicts over roughly the next 130 years. According to the chronicle of Joshua Stylite (Ps.-Josh. Styl. 50–4) the Persian king Kavadh I (r. 488–531) and his ally the Arab Lakhmid ruler Nu'man II (r. 499–503) invaded Roman territory in 502.

The invaders soon reached Amida,¹⁴ the modern city of Diyarbakır, being the second place of comparison now promising historic insights. The Persians' siege rams, ramparts and undermining tunnels all remained unsuccessful (Ps.-Zach. HE, 7.3–5; Procop. Pers. I.7.3–32),¹⁵ and thanks to the good condition of the walls the attacks were fended off – at least for a time. Only after three long winter months at the beginning of 503 did the besiegers finally find the weak spot in the fortification system: the water culverts through the city wall. Even though, according to Zachariah, the vulnerable point was guarded by a tower called Tripyrgion, the monks responsible for the task are said to have been in a drunken stupor. And so the Persians managed to get inside the city and massacre the inhabitants.

The sources remain unclear as to where exactly these water culverts were located. A tower by the name Tripyrgion (three towers) is unknown in later times and Albert Gabriel documented in his plans only an 'Aqueduct' to the north-west.¹⁶ Visiting Diyarbakır during the field season in 2010 we came upon a spot that fits fairly well

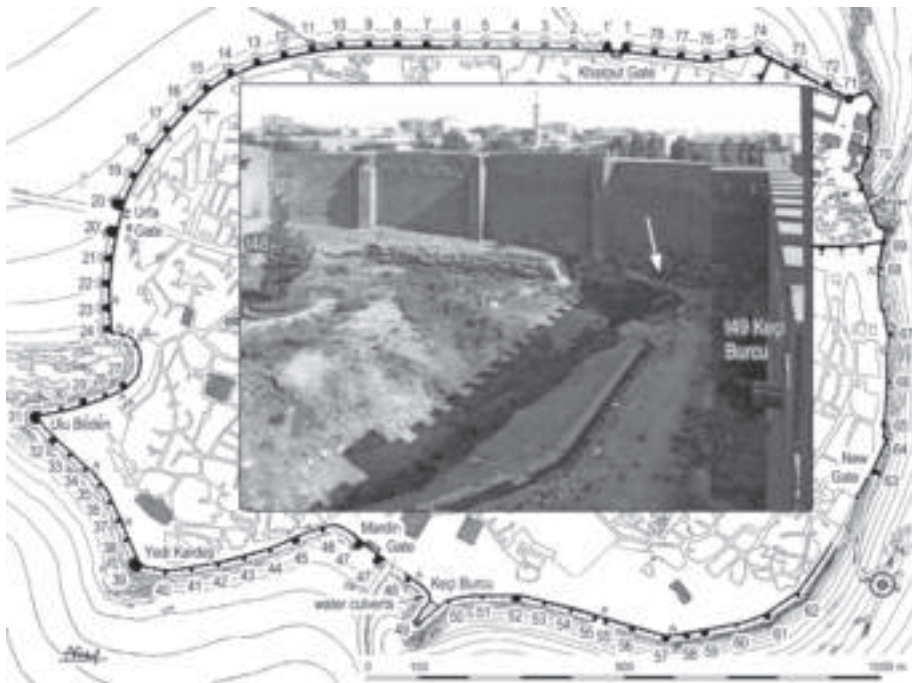


Fig. 6 Amida (Diyarbakır), water culverts in city wall (Map based on Gabriel 1940, figs 69 (93), 70 (96), 72 (98), 74 (100) & 76 (102); photo C. Hof 2010).

¹⁴ Greatrex 1998, 83–94; Greatrex et al. (Ps.-Zach. HE) 2011 (eds.), 227–41; Haarer 2006, 54–6.

¹⁵ For comparison of both sources see Greatrex 2010, 227–51.

¹⁶ Gabriel & Sauvaget 1940, 92, 93 fig. 69, 96 fig. 70. Geoffrey Greatrex has suggested ideas on the possible location of the late Antique culverts. Greatrex 1998, 90 n. 51; Greatrex et al. (Ps.-Zach. HE) 2011 (eds.), 237 n.53. I would like to thank Prof. Greatrex for discussing the matter with me.

with Zachariah's description. Near the large, roughly triangular tower now known as Keçi Burcu (Goat Tower)¹⁷ to the south-west of the circuit, ancient culverts (Fig. 6) still serve as a sewer today. The culverts are aligned almost east-west, correspondingly broadly with the alignment Zachariah gives.¹⁸

Amida's city walls were built in the 4th century, but were extensively remodelled in later times. The part of the wall with the culverts is one of the few stretches that still show signs of its late Roman origin.¹⁹

After the fall of Amida in 503, cities in the region would maintain their water culverts. At Edessa (Urfa), one of the invaders' next targets, we hear that the inhabitants had to hand over their private iron goods to be reforged into lattices, in order to bar the sluices (Ps.-Josh. Styl. 52). Dara-Anastasiupolis, which will be looked at below

(see stage 3), similarly relied on heavy iron bars. And it so happens that at Resafa we can also find traces of sudden measures for securing the water culverts. These changes were carried out in an early phase of the city wall's construction.

After the prototype wall partition at Resafa had advanced far enough to serve as an example, the time had come to engage many more work groups. We are able to trace their 'signatures' to a certain degree and thus can reconstruct specific working zones (Fig. 7).²⁰ Probably work was now concentrated on the round corner towers and the gates. Conventional partitions of curtain wall and towers followed the prototype example where every second large tower was to have a sophisticated shape: so at the west (t29–t36) and south (t36–t42) walls construction started on the polygonal and U-shaped towers.

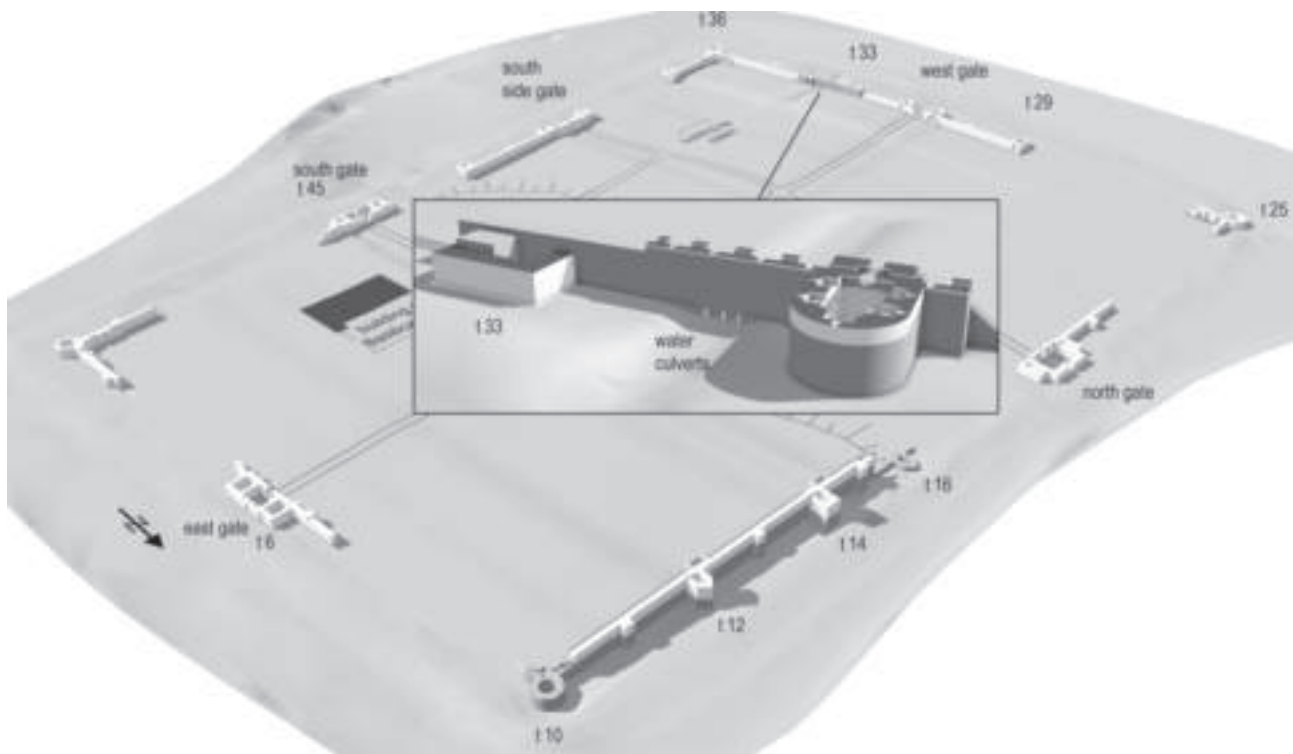


Fig. 7. Resafa, city wall, reconstruction of building stage 2. Changes at the water culverts after the fall of Amida 503 AD. The building site expands. New wall partitions rise according to the model section with sophisticated tower shapes (round, U-shaped and polygonal) (N. Erbe & C. Hof).

¹⁷ Tower number 49 according to Gabriel's counting: Gabriel & Sauvaget 1940, 100 fig. 74.

¹⁸ It has been suggested that the city wall in late Roman times connected tower 24 and the Mardin Gate in a fairly straight line: Parla 2005, 64–5, 78, 84. Gabriel, on the contrary, was convinced that the course of the city wall had not changed after the extension in the years around 370 and all rebuilding in Islamic times followed the course of the former 4th-century structures. He believed that the peculiar annex in the south-west used the convenient terrain simply to run along the scarp: Gabriel & Sauvaget 1940, 177.

¹⁹ The Keçi Burcu (tower 49) was re-erected in the 11th century (c. 1030), probably on remaining late Roman foundation walls: Gabriel & Sauvaget 1940, 125–7. This is also true for the Mardin Gate and tower 48: Gabriel & Sauvaget 1940, 160–1, 176.

²⁰ See note 4.

The original concept for the unprotected water passage indicates a certain degree of artlessness among the builders at the beginning. But after the fall of Amida in 503 some crucial structural features were altered. The investigations at tower 33 have shown that this tower, neighbouring the culverts, with its unusual transverse rectangular form and irregularities in the pattern of the galleried wall-walk, was certainly not part of the original plan.²¹ The tower had been intended as an ordinary small one, according to the overall scheme of alternating small and large towers.²² Enlarging the tower now made it permanently habitable, enabling watchmen to guard the culverts day and night.

And not only was the tower remodelled, but the water culverts themselves were also changed. Whereas in the beginning three rather large openings had been constructed, each almost one metre wide and 70 centimetres high, thus large enough for a person to fit through, now small secondary partition walls were inserted beneath the voussoirs of the lintel arches covering the original culverts.²³

Improving the protection of the culverts after 503 had suddenly become more important than sticking to the rhythm of the city wall's original layout.

Stage 3: Shortage of labour forces and gradual reduction in conceptual sophistication

The invasion came to a halt as the Persians reached the Euphrates on their way to Antioch (Antakya). In 505/506 a peace treaty was concluded, yet it was limited to seven years. It can be assumed that one of the conditions was the renewal of the old agreement not to build any fortifications close to the border.²⁴ Yet, the Romans were breaking this rule even as they signed the treaty: they had started to build the fortress at Dara-Anastasiupolis (Oğuz), which was to replace Constantina as the new base of the *dux Mesopotamiae*. The case of Dara is exceptionally well documented by Antique historians (Ps.-Zach. *HE*, 7, 6; Ps.-Josh. *Styl.* 90; Procop. *Aed.* II.1.4–II.3.28; Procop. *Pers.* I.10.13–18; II.13.16–19, in selection). The Romans were

well aware of their incredible flouting of the peace treaty and they only got away with it because the Persians were distracted by events on their border to the east and had to react against the Huns in the north. Not knowing when the Persians would turn their attention back westwards, the Romans had to expedite its construction.

Dara can be seen in comparison to Resafa in many aspects. It is chosen for this stage to clarify why two contemporary fortifications structurally lie so far apart and why building time was prolonged at Resafa.

As the walls at Dara just started to rise around 506, works at Resafa were probably in full swing and the situation at the water culverts had been corrected. At Dara much effort was required to tame the Dara Çay (the historic Kordes creek) that passes through the town. Two large water gates (an entrance and an exit) were built and the holes for metal bars give evidence of how the water culverts were protected. Zachariah claims that Dara was built within only two or three years (Ps.-Zach. *HE*, 7.6); in other words in almost no time at all. The haste at Dara went hand in hand with poor walling techniques, making repairs necessary very soon. Multiple phases of changes and repairs have been recorded,²⁵ leaving scholars to debate to what extent the walls were built under Anastasius or under Justinian. The fact remains that due to the unstable masonry in its lower bearing substructures, most of Dara's walls have collapsed.

The significance of Dara for our understanding of construction progress at Resafa is the fact that the aforementioned sources report that Dara's building programme was of absolute top priority within the region. Zachariah stresses that workers, especially masons, were paid excellent wages in order to entice them to the construction site near the dangerous border. And after the war Dara was not the only military building site on the eastern frontier in need of craftsmen. At Zenobia (see below) a new city wall was built, while other existing fortifications, which had proven to be in bad state, like Theodosiopolis, Dura-Europos, Edessa, Batnae and BIRTHA, were consolidated.²⁶

Since these other fortifications were regarded as more important, the growing lack of labour forces led to the

²¹ Salman 2008, 14–17, 24, 26–8, 32.

²² Hof 2010, 242–4.

²³ Brinker 1991, 137–45.

²⁴ Greatrex 1998, 117–18.

²⁵ Croke & Crow 1983, 154–5; Whitby 1986, 744, 767; Zanini 1990, 248–9.

²⁶ Capizzi 1969, 206–7, 224; Haarer 2006, 65–7.

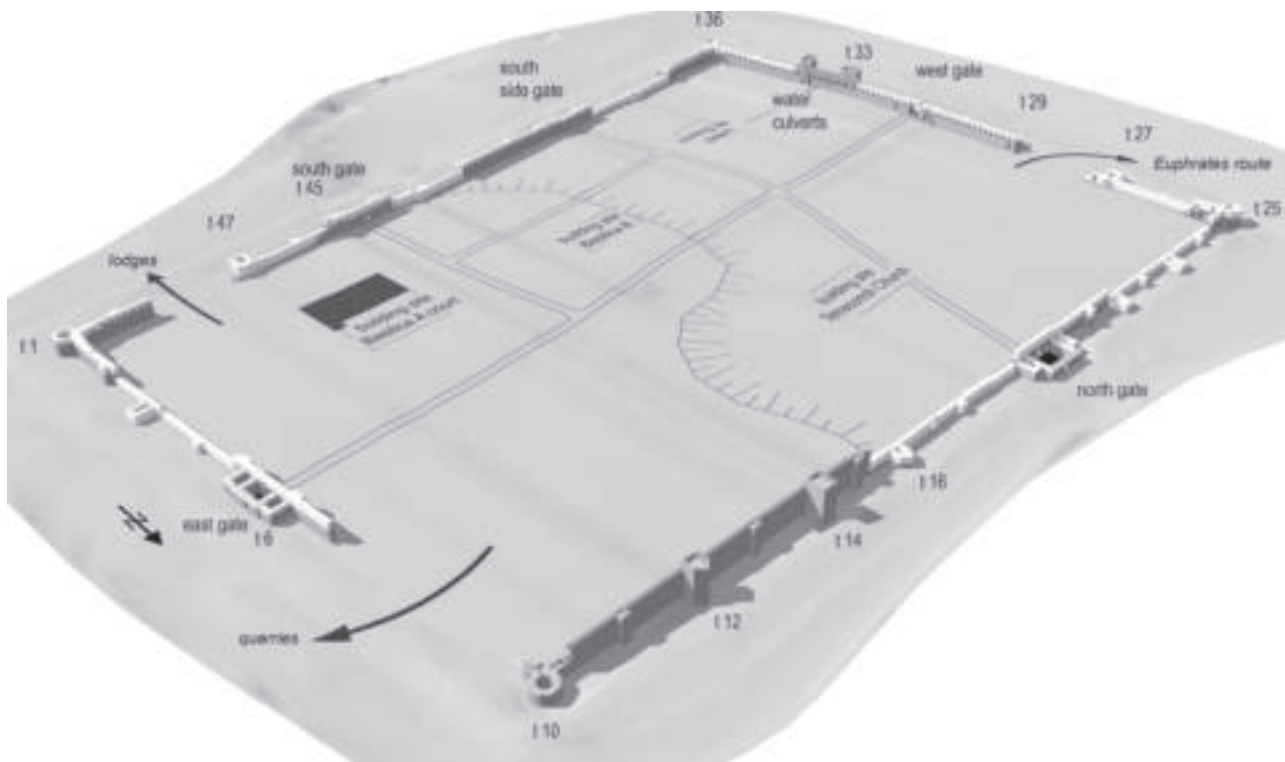


Fig. 8 Resafa, city wall, reconstruction of building stage 3. Further sections are being closed, new towers rise only in rectangular form. Towers rise slower than curtain wall. Three partitions stay open as operational gaps for traffic (N. Erbe & C. Hof).

suspension of crucial work in Resafa (Fig. 8). Certainly not only specialized labourers but also unskilled workers left the building site in pursuit of the more favourable conditions promised at Dara. We can trace the operational delays in different respects: in most cases the masonry joints between the curtain wall and the towers bond into each other only in the lower courses. Above a certain height, usually from the lower loop-holes upward, the masonry of the towers merely abuts against the curtain wall.²⁷ This indicates that the curtain wall rose in advance of the towers. And new towers from now on only rose as rectangular ones, as all sophisticated U- and polygonal forms were given up.²⁸

Yet these simplifications did not compensate for the shortage of labour forces and construction seems to have been on-going for about two decades. Meanwhile, external pressure rose again as in 513 the seven-year peace treaty had come to an end, and new Persian campaigns had to be acutely feared.²⁹ Even so, after 518 works on the enclosure must have had made sufficient

progress for the inhabitants to feel safe to concentrate on what they actually wanted to build: further monuments *intra muros*, especially Basilica B and the Tetraconch Church. These further building sites within Resafa must have additionally jeopardized the completion of the walls themselves.

A final effort was eventually made to finish the enclosure, by now even giving up its most characteristic feature: the galleried wall-walk. We can trace three late sections in the wall which we can assume had been left open as operational passages while the gates themselves were under construction and as such not yet suitable for traffic (Fig. 9). These sections are distributed rather evenly around the wall: one on the east side (t6–t10), one on the west (t27–t29), and the last one on the south side (t47–t49). From them, we can perceive the pressure under which this final building stage was accomplished: in these three sections the arcade gallery is only a fake defensive feature, since it consists only of blind niches. The connecting passage behind the gallery pillars

²⁷ Hof 2009, 815–16.

²⁸ Excavations had shown that the rectangular tower 45 was originally U-shaped: Karnapp 1976, 133 with fig. 138.

²⁹ Shahîd 1995, 16–19; Greatrex 1998, 120.

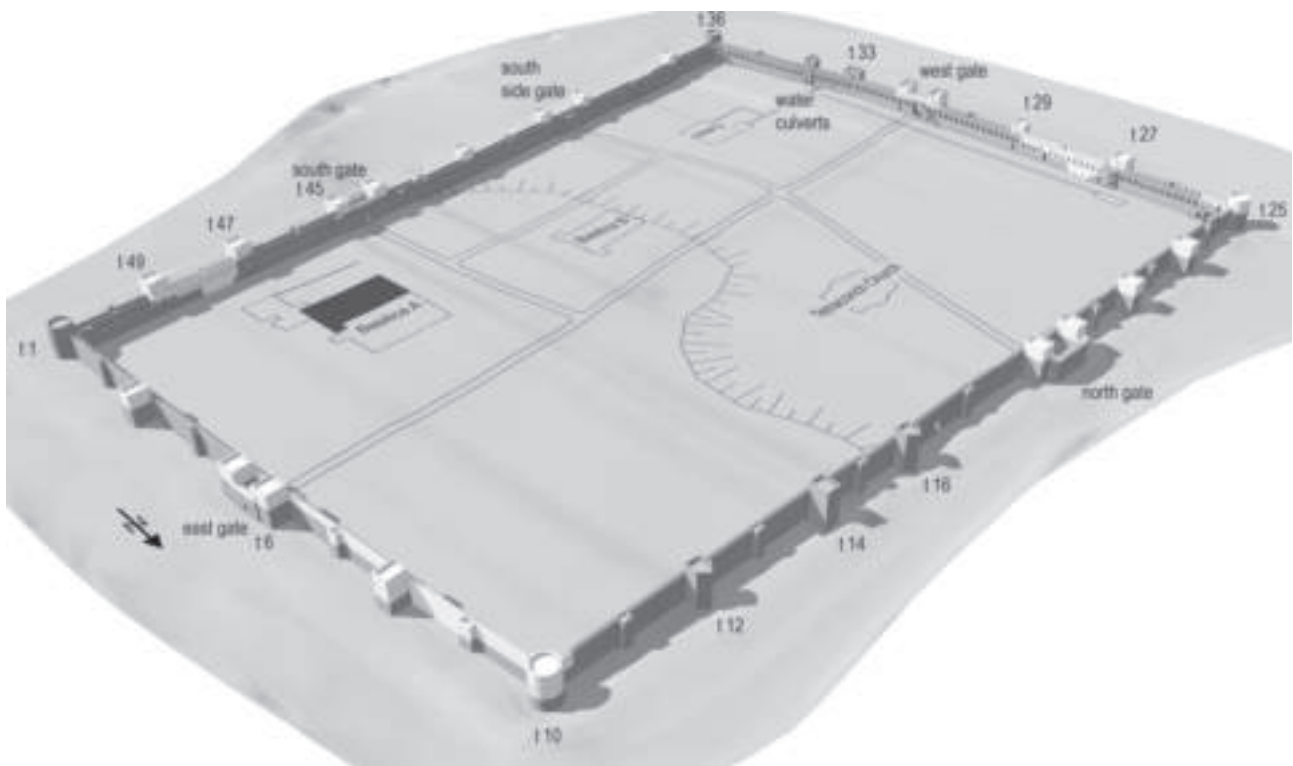


Fig. 9 Resafa, city wall, reconstruction of building stage 3, finishing off. Closing the last gaps without a wall walk behind the arcades at t6–t10, at t27–t29 and at t47–t49; finishing towers (N. Erbe & C. Hof).

forming the wall-walk is missing and thus the *chemin de ronde* is interrupted here. Originally the wall-walk was to continue, as can be seen at the entrance of tower 47 where on the left-hand side the half-finished passage was walled up before it had been vaulted. Omitting the wall-walk was not a sophisticated tactical feature, but just a makeshift solution. At least the missing wall-walk was well-camouflaged by the visually dominant gallery niches and a stranger spying on the fortifications would not detect the weak spot in the defences easily.

Stage 4: Vaulting the towers as protective reinforcement

Finishing the city wall of Resafa took time and most certainly lasted into the reign of Justin I (r. 518–27).³⁰ But it is likely that the task was accomplished before the next war: the so-called first Persian war of Justinian I (r. 527–65), which broke out in 526. In 532 a peace treaty was agreed upon,³¹ but this so-called ‘Eternal Peace’ would

only last for eight years. It was declared terminated by Chosroes I (r. 531–79) and his attack of 540 culminated in the Fall of Antioch. Coming from Circesium, and after a futile attack upon Zenobia, the Persians then headed for the city of Sura just to the north of Resafa on the banks of the Euphrates (Procop. *Pers.* II.5.29–35). Sura, in its military function superior to Resafa, was an old legionary fortress on the northern end of the *Strata Diocletiana*. Its old and damaged mud brick fortifications bore little to withstand the attacks of the Persians.³² The invaders destroyed Sura and took its inhabitants hostage. From here, Chosroes then demanded a high ransom from Sergiupolis in order to spare the city. Since the amount could not be raised, a delay of one year was agreed upon. To the terror of the residents, Chosroes returned with an army of 6000 men after the time was up. In the year 542 he besieged the fortified city and assaulted the city wall (Procop. *Pers.* II.20.2–16). Resafa’s fate was on a knife’s edge, but soon the attackers had to retreat because of water shortage, a deliverance which some saw as a divine miracle (Evagrius Scholasticus, *Hist. eccl.*

³⁰ See note 4.

³¹ Greatrex & Lieu 2002, 96–7.

³² Konrad 1999, 398–400; Konrad 2001, 5–12.

IV.28). However, another calamity soon brought further adversity to the region's communities: from 541–4 a plague pandemic began in Egypt and spread widely over Roman and Persian territory. Its impact was devastating and stultified both commerce and building activities.³³

For standards in contemporary fortification construction a comparison with Zenobia is most promising. The conclusions from the architectural relations and the probable dating within the historical context also shed light on Procopios' troublesome statements concerning works at Resafa.

The fortress city of Zenobia was of major military importance and, as in the case of Sergiupolis, Procopios (*Aed.* II.8.8–26) gives Justinian I the credit for building the entire city wall. Jean Lauffray has shown that this is true only in part:³⁴ the remains of the city wall at Zenobia belong chiefly to two phases. The original structure does not date to the 3rd century as Procopios indicates, but to the reign of Anastasius I (r. 491–518) and probably has to be understood as part of the refortification works that took place after 506. On the one hand, Lauffray has shown that the bulk of the southern and eastern walls have survived from that earlier phase. On the other hand, he was also able to verify some of Procopios's descriptions of rebuilding works under Justinian, especially the total renewal of the northern wall, which would belong to a second phase. Lauffray dates these later works around 545, and thus to the short time of truce after Chosroes I's invasions on Roman territory in 540/542.³⁵

In both phases the towers at Zenobia were built with vaults covering the upper storeys to make them fireproof and able to carry the load of artillery equipment and ammunition. Within the southern section of the curtain even the wooden ceilings over the ground floor were later replaced (possibly at the same time as the renewal of the north wall) by groined vaults built of bricks.

The stronghold at Zenobia persisted for some time yet Chosroes I's grandson, Chosroes II (r. 590–628) took the city in 610 and battered breaches in most of its curtain

wall sections, which meant the end for any substantial community at this site.

Besides Zenobia, Procopios in his *Buildings* names many fortifications which are supposed to have been strengthened or even built by Justinian I, one of which, as mentioned, was Resafa/Sergiupolis (*Procop. Aed.* II.9.6). But research has shown that this is not the case. Today most scholars accept that Procopios has to be read with caution. Nevertheless, his reports do contain underlying elements of truth.³⁶ We have no reason to believe that he made up the story of building activities at Resafa's city walls. But which works exactly might Procopios, who in the case of Resafa was reliant on third party reports, have been referring to?

As it appears now, Procopios's description has to be seen in connection with the erection of the vaults within the towers (Fig. 10). This additional structural strengthening was a strenuous effort: scaffolds, centrings and lifting devices had to be assembled in each tower, and the quarries had to be reactivated. The overall scale of the building site was as great, therefore, as during the original building of the wall.



Fig. 10 Resafa, north gate tower 19, secondary vault with cross symbols (C. Hof).

³³ Horden 2005, 153–6; Meier 2005, 91–6.

³⁴ Lauffray 1983, 34. Therefore, Zenobia and Dara-Anastasiopolis were probably built almost at the same time and the problem of labour force mobilization would have been enhanced.

³⁵ Lauffray 1983, 39, 148; Lauffray 1991, 38 n. 3. On the threat to Zenobia in 540 *Procop. Pers.* II.5.4–7.

³⁶ Critiques of the reliability of Procopios's descriptions concerning the building activities of Justinian I can be devastating (Cherf 2011; Croke & Crow 1983). Others have taken up the cudgels for the Antique historian (Whitby 1986) or even adopt an overall stance of confidence in his reliability (De'Maffei 1986; De'Maffei 1990). Well-balanced comments mention the inconsistencies of the work that never was intended as a factual report and that as a panegyric has its exaggerations and selective truths, yet nevertheless remains a valuable source (e.g. Cameron 1996; Brands 2002, 214–21).

The only indication the vaults themselves give concerning their dating are several cross symbols carved into key stones as well as into numerous ordinary voussoirs, setting them in Christian times.

If we assume that Procopios's account of work on Resafa's city wall refers to the vaults, this would set them between 527 and 560, the latter being the latest dating of his *Buildings*.³⁷ Within the historical context too it seems most probable that the vaults were finished prior to 540, since the fortification withstood Chosroes's assaults of 540/542.³⁸ They can plausibly be assigned to the period of the 'Eternal Peace' (532–40) just after the disastrous defeat of the Romans at Callinicum. In this case, the vaults would be related to the so-called 'FP1' (find point 1) complex, outside Resafa's enclosure to the south-west. This building, consisting of regular room-units, a bath and probably a small chapel, was identified by its excavator Michael Mackensen as some kind of lodging facility that was abandoned after a rather short time.³⁹ Maybe its short-term usage should be seen in connection with the erection of the vaults.

The circumstances that existed after the siege, with ongoing war threats and the raging plague, additionally support the notion that such a huge building task would simply have been unworkable after 540/542. This is stressed by reports that Resafa was hopelessly underpopulated with young men in these times (Procop. *Pers.* II.20.14; Evagrius Scholasticus, *Hist. eccl.* IV.28).

Stage 5: Extensive repairs, blockages and a new concealing function

Archaeology has revealed indications of decline at Resafa from the late 6th century onwards, which are explained by the calamities of war, plague and earthquakes. The

rivalries between Romans and Persians culminated in what would be their final war, from 602 to 628. Chosroes II's (r. 590–628) armies had overrun Mesopotamia and in 610 his general Shahrbaraz crossed the Euphrates, took Zenobia and eventually conquered all of Syria.⁴⁰ It is not unlikely that Resafa's gates were blocked at this time.

Decline thus was already considerably advanced here before the Arab conquest reached northern Syria in 637.⁴¹ In the second half of the 7th century this meant little change for Resafa's diminishing settlement and its decaying monuments. However, during the early 8th century its vitality recovered, and the city even experienced a new heyday after the Umayyad caliph Hisham ibn 'Abd al-Malik (r. 105–25/724–43) chose the location as his main residence.⁴²

Arab sources are more informative concerning the region we are focusing on than earlier ones.⁴³ The enhancement of settlements within arid areas is one of their major interests. Especially in al-Balādhurī's oeuvre hydraulic structures are widely described, and the historian underlines their importance for early Islamic strategies in settlement policy. Earthen ramparts as part of hydraulic engineering structures are of far greater importance to al-Balādhurī than those having a defensive function.

One of the few sites of the region that has also been investigated in the context of water management is Qasr al-Hayr al-Gharbi. Whereas the renowned, gigantic Harbaqa dam⁴⁴ probably dates to Roman times,⁴⁵ the other preserved structures, including the birket (reservoir) with surrounding earthen ramparts, were built by caliph Hisham between 724 and 727. Since every drop counted, a smaller dam by the gardens collected the rainwater run-off from round about.⁴⁶ Research is just beginning to understand the strategies of water management in Umayyad times that led to the re-evaluating of settlements at the desert's fringe.⁴⁷

³⁷ Procopios wrote his book *De Aedificiis* in either 554/5 or 559/560. On the discussion see Cameron 1996, 9–10.

³⁸ Other options will be discussed in Hof (forthcoming).

³⁹ Mackensen 1984, 9, 24–5.

⁴⁰ Greatrex & Lieu 2002, 182–93.

⁴¹ Late Antique and early medieval town development is best investigated and understood for western Syria due to the mass of archaeological remains there. Georges Tate (1992, 333–42) has shown a gradual decline already during the second half of the 6th century. On the region of the Limestone Massif also see Witakowski 2010. For the whole of Syria, Foss 1997.

⁴² Gussone & Sack 2013; Brands 2011, 64–76; Sack *et al.* 2010; Fowden 1999, 174–85.

⁴³ Especially al-Balādhurī, al-Ya'qūbī, aṭ Ṭabarī und Yāqūt and additionally the Persian historian al-İsfahānī. Smadi 1991, 237–47; Kellner-Heinkele 1996.

⁴⁴ Schlumberger 1986; Saliby 1990, 475–84; Garbrecht 1991, 212–20.

⁴⁵ Schlumberger (1986, 25) dates the dam on the grounds of its masonry technique to the 1st or 2nd century AD. Denis Genequand (2006, 67–9) rather sees similarities to Umayyad examples.

⁴⁶ Garbrecht 1991, 219.

⁴⁷ Genequand 2009, 157–77.

Probably around the year 727 Hisham was likewise active at Rusafat Hisham, as Resafa was now called. He built sumptuous residences for his family and members of his court, almost all located outside the city wall.⁴⁸ Yet Hisham had no intention of staying clear of the old city; on the contrary, he built his Great Mosque directly alongside the city's main church Basilica A.⁴⁹ This leads to questions concerning the relation between the 'old town' *intra muros* and the developing periphery.⁵⁰

Some answers are certainly to be found within the elements separating the two zones: the city wall with its gates, and the earthen rampart and accompanying ditch in front. This rampart-ditch system surrounds the entire city wall and the level difference between ditch invert and rampart ridge is still up to 5.6 metres. Oddly, the system runs without disruption in front of most of the city gates, only the north gate has a clear forecourt. Simultaneously all gates within Resafa's city wall, with the sole exception of the central gateway of the north gate, were found to have been deliberately blocked when investigated from the early 20th century onwards.⁵¹ Walling up the city gates was a familiar measure in times of threat. After things returned to normal, these passages would have been cleared again to allow traffic that was vital for the settlement's existence. However, the rampart-ditch system obstructing the passages persisted. We do not know when these gates were blocked for the last time, but the period around 610 is certainly a possibility.

Hisham had invested a lot in revitalizing Rusafat Hisham. Why then, provided he accepted the barriers or even was their initiator, would he sustain the disadvantage of hampered traffic? Two suggestions may be made.⁵²

On the one hand, it is assumed that the ramparts and ditches, alongside their probable original purpose as part of the fortifications, also served in Islamic times for water harvesting. In the context of investigations on the ancient water management of Resafa,⁵³ it appears likely that the water run-off of the rampart and also of the

surrounding surfaces was collected in the ditch and was led either to the main canal feeding the cisterns or to secondary collecting ponds. The sources give us reason to believe that the rampart and ditch could have served as an additional feature within the complex hydraulic system at Resafa: Balādhuri, in his passage covering Rusafat Hisham, informs us that caliph Hisham constructed two canals (al-Hani and al-Mari) near al-Raqqā, the former Callinicum (al-Balādhuri, *Futūh*, 280). The proximity of the water's edge is even implied within the name Ruṣāfat that can be translated as 'causeway'.⁵⁴ This might refer to the terrain step at the edge of the Wadi-es-Sêlé, upon which the settlement lies.

On the other hand, it seems that the blocked gates were also accepted because only few controllable exits were seen as desirable. Already in relation to the late 6th century, and more so for early Islamic times, the character of the walled city area has been described as 'ḥaram'.⁵⁵ In this sense the wall defines a protected area, mainly reflecting its religious and socio-cultural functions. Possibly the function of a protected zone was deliberately retained in the Islamic times that followed, and we should also bear in mind that this included the operation of a market. The old inhabitants were tolerated and their Saint adored, yet the religious, spiritual and secular life were under the control of the new authorities residing outside the city walls.

Conclusion

Building surveying and investigations have made it possible to reconstruct the sequence of construction and to some extent the rate of building progress of Resafa's city wall. Written sources, not only on Resafa itself but including a wider range of contemporary buildings and events, shed so much light that, together with the sparse epigraphic evidence, a good framework for the probable absolute chronology could be drawn. Comparing the city

⁴⁸ Sack 2004, 207–32.

⁴⁹ Sack 1996, 155–6, Fowden 1999 181–2.

⁵⁰ This is one of the main research questions addressed by the recent Resafa-Project.

⁵¹ In the meantime, mainly in the 1960s, the west, north, and east gate courts have been excavated. At the north gate the two side gateways were unblocked by the Syrian Directorate of Antiquities.

⁵² Planned excavations at the city gates and the rampart have had to be delayed because of the conflicts in Syria since 2011. Little hope exists that the current Resafa-project can resume work on-site in the near future and our thoughts are with our workmen and their families.

⁵³ These are being investigated within sub-project 2, 'Archaeology and Prospection' at the Freie Universität Berlin, Department of Earth Sciences, Physical Geography: Berking *et al.* 2012.

⁵⁴ Al-Balādhuri, *Futūh*, 179–80 ed. Hitti 1916, 280 n. 1 (referring to Ruṣāfat Hiṣām) and 446 and 457 n. 3 (referring to ar-Ruṣāfah near al-Mansur/Baghdad). For the meaning as 'causeway', cf. Le Strange 1905, 40, 106.

⁵⁵ Fowden 2000, 314–15; Fowden 2002, 134–7. See also Shahîd 2002, 117.

wall of Resafa with other structures in the region finally helps to explain why changes in plan and construction were made. These changes include the diminishing of the water culverts and the redesigning of their neighbouring watch tower, the reduction of forms (tower shapes, wall-walk), and the introduction of vaults within the towers. Vice versa, understanding the development at Resafa will help to understand other contemporary fortifications in the region, like Dara and Zenobia: we must not regard Resafa as a typical late Roman fortification any more, since the initial eloquent structure was far from being an ideal military bulwark. Understanding the subsequent reinforcement of the towers with vaulted ceilings may even dissolve an alleged antagonism between Procopius's short account on Sergiupolis and the given archaeological evidence.

The character of Resafa's city wall clearly shifted from a representative towards a defensive and finally to a screening one. These changes have become comprehensible due to the mentioned conversions, with further ones being the blocking of the gates and the banking up of the ramparts. What during the 6th and 7th centuries was an urban centre with a rural periphery reversed in Umayyad times: the centre of power had shifted to the vicinity and the ḥaram-enclave within the city wall was now controlled from the outside.

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The Fortification of Regions

REGIONAL FORTIFICATIONS AND THE FORTIFICATION OF REGIONS*

Sylvian Fachard

This section is dedicated to extra-urban fortifications, i.e. defensive walls which do not defend a city, but are built over a larger region. No exact technical term matches this category, which has multiple forms, from Hadrian's Wall to Greek mountain fortresses. It is therefore the task of each scholar to find the most appropriate definition of the walls he is studying. Indeed, the vocabulary might change from one region to another, and the various papers which follow, ranging from Spain, Italy, Croatia, Greece, Cyprus, Palestine to Turkey, illustrate this eloquently. It was therefore the goal of the organizers to find a title which could be as neutral as possible, as well as non-exclusive.

In the Greek world, extra-urban fortifications are often called 'rural fortifications'.¹ These defensive constructions belong to a wide-ranging phenomenon which progressively saw some city-states (*poleis*) fortify not only their city (*asty*), but also various settlements and positions of their territory (*chora*). A quick estimate shows that the number of regional fortifications must

be counted in the thousands. They belong to different types and were built for different reasons. Therefore, their functions can vary widely from one city-state or region to another. We believe that a landscape approach, aimed at putting these fortifications back in the historical landscape in which they were built, can help us understand their various functions. 'Fortifying a region' has become an expression describing the simultaneous construction of fortifications in a region, thus enhancing the level of security by the multiplication of fortified positions. Such 'systems', in which fortifications function together in a more global strategy, are found for example in the Roman borderlands. They are characterized by a unity in form, date and construction. However, in other cases, it might be hard for archaeologists to prove the simultaneous building and occupancy of dozens of fortifications. Are we comfortable enough with our dating to claim that all the fortifications of a region 'worked' together in a coherent system? Moreover, what appears to be a coherent system to a modern eye used to define regions on a topographical map might be, in fact, elusive.

* The members of this group include Brita Jansen, Judith Ley, Astrid Lindenlauf, Eric Laufer, Elke Richter and Peter Schneider. This short introduction is a summary of the chapter devoted to rural fortifications, published in the Fofo volume I. It benefited from Rune Frederiksen's suggestions.

¹ Different terms have been used in the scientific literature: country fortifications, territorial fortifications (convenient when the walls are found in the territory of a Greek *polis*), regional fortifications (although the latter might be too vague in some instances), extra-urban fortifications, etc. In French, the most used terms are 'fortifications rurales' (Garlan 1974, 80; Fachard 2012), 'fortifications territoriales' (or 'fortifications du territoire') and 'fortifications extra-urbaines' (Hellmann 2010, 343).

Subsequently, can we still talk about the 'fortification of a region' when the fortifications were instead part of a piecemeal process elaborated over several centuries? We believe not.

The act of fortifying means building a fortification around a given space. One can fortify a position, a mountain-top, a town, a village, a beach, etc. Similarly, 'fortifying a region' would mean surrounding a region with a wall. Such examples do exist, but we must be careful not to exaggerate their missions, neither to overstretch the regions they were supposed to defend. For example, the walls built in 480/479 BCE at Thermopylai and the Isthmus of Corinth were erected as tactical obstacles in coordination with an army, but it would be far-fetched to claim that they were meant to fortify Central Greece and the Peloponnese respectively. Similarly, the Anaphoritis Walls,² 11 km long, might have been built to defend the approaches to Chalkis from the continent, but they were never aimed at defending the island of Euboea as a whole. However, in some cases, coherent regions were clearly fortified and defended by linear barriers. The peninsula of Thracian Chersonese was walled off in the 6th century BCE and again in the 4th century BCE.³ Entire plains could also be defended: in 378/377 BCE the Thebans dug ditches and erected palisades in the Boeotian plain in order to halt Agesilas' expedition.⁴ Many more walls of this sort, built with perishable materials, might have existed. In the Greek World, it is clear that regions could be fortified by erecting linear barriers. In the Roman Empire, both Hadrian's and Antonine's walls did fortify Roman Britain as a region, but examples of this magnitude and perfection remain unparalleled in the Greek World.

For these above-mentioned reasons, we prefer to apply the expression 'fortification of a region' to cases in which a linear barrier is built to protect a region or a peninsula, and in which similar and closely positioned fortifications were either built or functioned at the same time in order to fulfil a common goal. The need to deal with non-urban fortifications was on FoFo's agenda since the very beginning of our 'think-tank'.⁵ It appeared to us that it would be helpful to review a series of problems and questions that scholars working on non-urban fortifications are confronted with. The goal was to outline

a method which could be applied to different datasets and different regions of the Mediterranean and beyond. Such a methodology is not intended to be rigid marching orders, but a series of guidelines for understanding the factors that govern the construction and position of fortifications scattered in a geographical region. We all agreed to keep it as open as possible in order to be helpful for people working in different historical and cultural contexts.

The need for a landscape approach

Little theoretical work has been written about the factors that commanded the placement of fortifications in the landscape. Military determinism, influenced by the paradigm of the Roman *limes* and modern strategic concepts (since the 19th century CE), have acted upon our understanding of rural fortifications. A common trend has been to interpret them as part of a military network, in which every fortification is a pawn visually interacting with others, often positioned in order to 'block' or 'control' a road, a passage, a shore or a border. These approaches – driven mostly, if not exclusively, by strategic concepts – lead us to a somehow blinkered view. Too often are the fortifications described as 'fortresses controlling a road', when they are in the first place settlements protected by a defensive wall, which are, for obvious economic reasons, sited near a road and linked to a wider network (interconnectivity). In fact, it would be extremely surprising if fortified settlements were not connected by roads. It is interesting to see that this military determinism has dominated fortification studies since the 19th century, and not only in the Mediterranean. In medieval Britain, for example, Creighton has shown vividly how this militaristic focus has diverted scholars from studying the distribution of castles in the landscape and the factors that commanded their construction at a given place.⁶ As a result, castles have been detached from the landscapes in which they were built. Creighton's approach has been to 'put medieval castles back in their places', by adopting a landscape approach which brings together historical geographers, historians and archaeologists.

² On this wall and the adjacent forts, see Bakhuizen 1970.

³ See Frederiksen 2011, 16 for other examples, including the probably Bronze Age Isthmus Wall.

⁴ Xen. *Hell.* 5.4.38.

⁵ Although we did not have time to visit a corpus of regional fortifications, we nevertheless spent a fair amount of time discussing issues related to regional and non-urban fortifications. Moreover, half of our work-session held in Damascus was dedicated to the definition of fortified regions and the study of regional fortifications.

⁶ Creighton 2002.

When studying regional fortifications in the ancient world, we must try to recreate the historical landscape in which they were built. By doing so, it becomes possible to understand the various factors – not only military and strategic ones, which, by the way, are often the easiest to perceive – that influenced their construction. A landscape approach often reveals that the choice of a site, when building a fortification, was related to a wide range of factors and decisions often taken at different levels, from local to global (and/or vice versa). In some regions, a master plan of national defence or grand strategy might fail to explain the complexity of fortification distribution. In other regions, a clear militaristic agenda commanded the position of fortifications. Therefore, we are not claiming for a demilitarization of the field of rural fortifications studies. We are claiming instead for a wider and more cautious approach that embraces as many factors of analysis as possible, and not only a military one.

A distribution map of fortifications, like any distribution map, is a main instrument in archaeological research and spatial analysis. A map is not free from subjective elements, ambiguity and uncertainty. Trying to understand an apparently rational pattern of distribution can be illusory when we think of the number of decisions separately motivated and taken at different times.⁷ The factors that commanded the building of fortifications in the landscape are complex and diverse. They can be the result of compromises taken at different levels. This complexity can only be studied when repositioning the fortification in the historical landscape in which it was originally built. The landscape approach can, therefore, be a solid method for studying the distribution of fortifications in regions. It consists of several steps.

1. DEFINING THE LIMITS OF REGIONS

It is important to define the limits of the study region and to clarify its political status, as well as its settlement hierarchy. Are we working in a single *polis*, a league of *poleis*, a province or an empire? This also includes the complex and difficult study of the political borders of our region, in order to correctly position our fortifications.

2. IDENTIFICATION AND TYPOLOGY

The second step is an archaeological analysis of each fortification. A description of the masonry of walls is not enough for understanding the true identity of a site, or

its date. Fieldwork must be carried *intra muros*, as well as *extra muros*, in the immediate surroundings, ideally by conducting extensive or, better, intensive survey. The goal is obviously to date the occupation of the site with the help of surface pottery. Ideally an excavation should complete such an investigation, although this is often an unrealistic goal due to permit and financial limitations.

The data gathered should then help us classify each site into a typology of rural fortifications. This theme has been widely discussed among FoFo, and we agreed to define a typology that contains the following main categories:

- fortified settlements (nucleated settlements surrounded by a defensive wall)
- fortresses and military forts (whose function are primarily military and built for the needs of an army)
- towers (farms, isolated dwellings, military towers, observation towers, lighthouses, etc.)
- rubble enceintes of temporary use (refuges, *Fluchtburgen*, military camps, etc.)
- linear *barriers* (linear walls, fortified remblais, ditches with palisade, but not urban long-walls)

Once a typological study has been completed, it is useful to present the different categories of fortifications using charts, tables and distributions maps. If, in a given polity, 80 per cent of rural fortifications are fortresses, then this trend would clearly demonstrate that a strategic and military agenda was set up. If, on the other hand, most of the fortifications are fortified settlements, then other factors must be taken into account.

3. THE HISTORICAL LANDSCAPE

The third step is to recreate the landscape in which the fortifications were built. This can be achieved by adding several layers of information to our regional map, mostly archaeological sites and nucleated settlements. Unfortunately, a common trend in the 1980s and 1990s was to publish distribution maps of fortifications which ignored other sets of data, such as settlements. Obviously the distribution of rural fortifications on a blank regional map focuses on only one category of data and neglects human and social factors. Instead, if you add up the geomorphology, all archaeological sites known in a given period, the main nucleated settlements, road-network and agricultural surfaces it then becomes possible to grasp the complexity of a

⁷ On these issues, see Hodder and Orton 1976, 9.

particular historical landscape. With the help of GIS – a very powerful tool for reconstructing and interpreting regional archaeological datasets – we can combine these different layers of information, and make them interact with the distribution of fortifications.

4. ANALYSIS

The last step analyses the functions of fortifications as well as the factors that led to their construction. This can be done by looking at the different relationships between fortifications and borders, roads, settlement pattern, agricultural and economic resources. Also, several analysis tools found in GIS packages can be helpful at this stage of the analysis. For example, a ‘viewshed analysis’ can draw areas of visibility available from one, two or more fortifications. Territorial allocations based on time/effort to cross the landscape can be used to assess the extent of the region most easily accessible from each fortification in a one hour walk, or measure the walking time between fortifications and settlements.

The relationship between each category of fortification and the different features that form their historical landscape must be conducted both at the micro- and macro-geographic levels. This will help us assess the possible role played by a fortified site in its micro-region (radius of 2–5 km), which often corresponds to the theoretical territorial space of a settlement in the Greek world. When we zoom out to a radius of 10–15 km, it is often possible to study more complex datasets combining several settlements and fortifications and how they can interact in larger regions. Lastly, the extra-urban fortifications must be studied at the level of the entire territory of a given polity.

Conclusion

A landscape approach helps us recreate the historical landscape in which the fortifications were originally built. It includes a multitude of types of analysis, which can help us understand the factors that commanded the construction of walls at a given place. It also helps us study relationships between fortification and agricultural surfaces, economic resources, regional markets, settlement

patterns, local internal borders, interstate borders, road-network. All these analyses should be carried on both at a macro- and micro-regional scale.

A recent analysis for the territory of Eretria suggests that military factors were not paramount when fortifications were built.⁸ Instead, human and economic motives dominated the construction of fortifications, which coincides with the most intensive occupation of the landscape. In Akarnania, the geographical and political agenda was different, and the various *poleis* put in place their own policies of homeland security.⁹ In other regions, fortification siting might be driven by a military or strategic agenda.

Fortification siting is the result of a multitude of decisions, perhaps a compromise of decisions taken at different levels, and resulting from past experiences and more permanent latent threats. A landscape approach can reveal the diversity of reasons that commanded the construction of rural fortifications, and help us understand the role they played in the ancient society as a whole.

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⁸ Fachard 2012.

⁹ Ley 2009.

ÉTUDIER L'ORGANISATION DÉFENSIVE D'UNE RÉGION ET SON ÉVOLUTION: POUR UNE ARCHÉOLOGIE HISTORIQUE DES FORTIFICATIONS. QUESTION DE MÉTHODE*

Claire Balandier

Résumé

A partir des résultats de recherches en cours, en Chypre, en Palestine et en Grèce, cette communication montre comment les études archéologiques et historiques d'ouvrages fortifiés dans une région donnée permettent de reconstituer les politiques défensives établies par les puissances ayant contrôlé cette région.

D'abord est présentée l'élaboration de la méthode d'étude de l'histoire de la défense des territoires à partir du cas de Chypre. Puis on voit comment cette méthode a permis d'étudier les politiques défensives des Achéménides et des Lagides en Palestine et de replacer les résultats obtenus dans une perspective historique régionale. Enfin, sont présentés les premiers résultats de cette méthode appliquée à l'étude de la défense de différentes régions de Grèce (Argolide, Béotie, Achaïe, Thessalie).

L'apport de cette approche méthodologique de l'histoire de la défense des territoires est souligné. On insiste sur la nécessité de recourir à toutes les sources pour effectuer l'inventaire des fortifications d'une région. Face aux textes muets, l'étude attentive de chaque fortification, cartographiée, replacée dans son contexte et dans le réseau défensif auquel elle appartient, permet de distinguer les phases d'organisation défensive d'une région. Cela est possible seulement si les vestiges fortifiés sont correctement datés, par une fouille stratigraphique ou au minimum par comparaison avec d'autres vestiges voisins bien datés. Alors, les études régionales d'ouvrages fortifiés peuvent déboucher sur de réelles conclusions historiques et permettre de discerner l'évolution des politiques défensives établies dans telle ou telle région. Ces études régionales, qui se multiplient aujourd'hui, seront d'autant plus suggestives qu'elles seront conduites sur la longue durée et que les différentes phases des ouvrages fortifiées auront été précisément datées.

* Je tiens à remercier les organisateurs du colloque, en particulier Rune Frederiksen, pour leur invitation, et souhaite leur rendre hommage pour avoir ainsi permis aux spécialistes des fortifications, de différentes générations et de divers horizons, de se rencontrer.

Introduction

Lors du colloque consacré aux fortifications et à la défense du territoire en Asie Mineure occidentale et méridionale, qui s'est tenu à Istanbul en 1993, Pierre Leriche déclarait que « l'étude archéologique des fortifications est devenue une démarche indispensable à qui veut connaître l'histoire d'un site urbain ou d'une région du monde grec ».¹ Je préciserai qu'est devenue indispensable non seulement l'étude archéologique des fortifications, mais également l'étude historique, car l'analyse technique d'un ouvrage fortifié me semble d'un intérêt limité si cette analyse n'est pas replacée dans une perspective historique. La conception d'ensemble d'un ouvrage fortifié, son implantation régionale et sa place au sein d'un réseau défensif peuvent permettre de comprendre la volonté politique et stratégique des pouvoirs qui l'ont fait ériger. L'objectif de cette communication est de montrer comment l'étude des fortifications d'une région donnée peut permettre de reconstituer l'organisation défensive de cette région et, à travers elle, la politique stratégique qui l'a sustentée. L'approche méthodologique sera illustrée par les exemples de Chypre et de la côte levantine.

1. Approche méthodologique de l'étude de la défense d'une région

Des monographies régionales consacrées aux fortifications et à l'organisation défensive de telle ou telle région périphérique de la Méditerranée ont vu le jour dans les années 1990 sur la défense de Cos et Calymna, de la Carie, de l'Ibérie, de la Phocide.² C'est dans ce contexte que j'avais effectué ma propre recherche doctorale consacrée aux fortifications et à l'histoire de la défense des territoires de Chypre de l'époque archaïque aux invasions arabes, soit du VIII^e siècle av. J.-C. au VII^e siècle de notre ère.³ Je vais présenter l'approche méthodologique élaborée pour le cas de Chypre, puis comment celle-ci a été reprise pour le cas de l'étude de la défense de la Syrie-Palestine.

1.1. LE CAS DE CHYPRE

Située à l'est de la Méditerranée, Chypre a une position géostratégique primordiale et a ainsi été, de tout temps, le théâtre de nombreux affrontements et de dominations

successives (depuis les Assyriens jusqu'à l'empire byzantin, en passant par les Achéménides, les Lagides et les Antigonides ou les Romains). Elle se présentait donc comme un objet d'étude de choix pour conduire une réflexion historique sur la défense des territoires. Travailler sur la longue durée, sur plus de quinze siècles, devait permettre de mettre en évidence une évolution dans l'organisation défensive de Chypre en fonction des politiques stratégiques des puissances qui avaient occupé l'île. Les résultats historiques de cette recherche ayant été publiés sous la forme de différents articles,⁴ c'est essentiellement l'approche méthodologique que j'ai élaborée au cours de ces dernières années que je vais présenter ici.

1.1.1. Inventorier les sources

Quand on étudie une région, il faut commencer par effectuer l'inventaire des sources. Les sources écrites sont le plus souvent extrêmement lacunaires sur les politiques défensives : Chypre ne déroge pas à la règle. Les textes littéraires ne font qu'évoquer la présence de garnisons ainsi que de quelques sièges survenus dans l'île et de rares inscriptions mentionnent la reconstruction d'une enceinte (tableau 1).

Si ces textes n'apportent aucun détail sur les techniques de sièges ou les fortifications, ils ont néanmoins le mérite de témoigner de l'existence d'une enceinte à un moment donné, enceinte dont la trace n'a pas forcément été conservée. L'inventaire des ouvrages défensifs mentionnés ou suggérés par les textes à l'occasion de récits de sièges survenus à Chypre révèle qu'ils sont peu nombreux : seuls dix sites semblent dotés d'une enceinte, toutes périodes confondues.

Ces ouvrages défensifs replacés sur une carte (Fig. 1), celle-ci nous dessine une géographie de la défense de Chypre qui donne l'impression que seuls les sites côtiers étaient fortifiés, à l'exception de la ville d'Idalion. Ces dix sites correspondent aux dix capitales de royaumes de l'île. Si l'on se limitait au seul inventaire des sources écrites, on pourrait donc en conclure que seules les villes principales de l'île avaient été fortifiées.

L'inventaire des sources archéologiques s'est avéré plus riche : des tronçons d'enceintes ont été découverts par les fouilles sur 19 sites (Fig. 2). Non seulement l'archéologie

¹ Leriche 1994, 9.

² Baker 1991 ; Moret 1996 ; Pimouguet-Pédarros 2000 ; Typaldou-Fakiris 2004.

³ Balandier 1999.

⁴ Balandier 2000 ; Balandier 2001 ; Balandier 2002a ; Balandier 2002b et Balandier 2003.

Tableau 1 Textes évoquant l'existence de défenses urbaines (Balandier 1999 et Balandier 2002b, 177).

Date	Source	Evocation de défenses urbaines
ca. 570 av. J.-C.	Diod. 1.68.6	Siège des « villes de Chypre »
499	Hdt. 5.110	Sièges de Salamine et d'Amathonte par Onésilos
498	Hdt. 5.115	Siège de Soloi par les Perses
478	Diod. 11.44	« Villes de garnisons » perses dans l'île
ca. 450	Inscription CJS 217 : « bronze d'Idalion »	Siège d'Idalion « par les Mèdes et les Kitiens »
449	Plut. <i>Cim.</i> 18	Siège de Marion par Cimon
449	Thuc. 1.112.2–4 Diod. 12.3–4	Sièges de Salamine et Kition par Cimon
411	Isoc. <i>Evagoras</i> 30	Salamine : Evagoras entre dans la ville par une « poterne »
ca. 400	Isoc., <i>Evagoras</i> 47	Salamine : renforcement des défenses et élargissement de la zone fortifiée
391	Diod. 14.98	Sièges de Kition, Amathonte et Soloi par Evagoras ? Vouni ?
386	Théopomp. <i>FGrHist</i> 115 F 113	Reconquête de l'île par les Perses et siège de Salamine
350/349	Diod. 16.42.8–9	Siège de Salamine par Evagoras II
321	<i>Arr., Ta meta Alexandron</i> , in <i>Flavii Arriani quae exstant omnia II : Scripta Minora</i> , A.G. Roos (ed.) (1968) ² , 280–1.	Siège d'une ville (Marion ?) par Ptolémée, fils de Lagos
ca. 320	Inscr. du sanctuaire de Palaepaphos, in Maier 1959, n°58	Restauration de l'enceinte de Paphos (Palae ?)
315	Diod. 19.62.6	Sièges de Keryneia, Lapethos, Kition par Séleucos
312	Diod. 19.79	Marion rasée sur ordre de Ptolémée, fils de Lagos
307/6	Diod. 20.47.1–4 et 48	Siège de Salamine par Démétrios
307/6	Plut. <i>Demetr.</i> 16 Diod. 20.53	Prise de l'île et de ses garnisons par Démétrios
ca. 305	Inscription T. 54/308 (tesson peint)	Mention des « quatre portes » de la ville d'Idalion
154/3	Polyb. 33.13	Siège de Lapethos par Ptolémée VI Philométor contre Ptolémée VIII Evergète II Physcon
ca. 200 ap. J.-C.	Inscription Cyprus Museum File 155, in Mitford 1950, n°10.	Mention de la construction de l'enceinte par Cl. Leontichus Illyrius, consul romain à Chypre

confirme l'existence de fortifications là où les textes les mentionnaient, mais elle témoigne également de l'existence d'autres ouvrages fortifiés. Or, les sites fortifiés révélés par les fouilles archéologiques ne sont pas tous côtiers, mais également implantés à l'intérieur des terres. Idalion n'est donc pas une exception.

Il fallait alors poursuivre l'enquête en recensant les résultats des prospections au sol menées dans l'île (Fig. 3) : 27 sites au moins viennent s'ajouter à ceux que nous ont révélés les textes et les fouilles.

Ce sont ainsi pas moins de 46 sites fortifiés que j'ai pu inventorier dans l'île, érigés entre le XI^e siècle av. J.-C. et le VII^e siècle de notre ère.

1.1.2. Tri et datation des vestiges fortifiés

Il fallait donc ensuite essayer de distinguer chronologiquement ces vestiges les uns des autres, déterminer leurs périodes de construction, de destruction, de réfection et d'abandon afin de pouvoir écrire l'histoire de la défense de Chypre. Il va de soi que seule une fouille

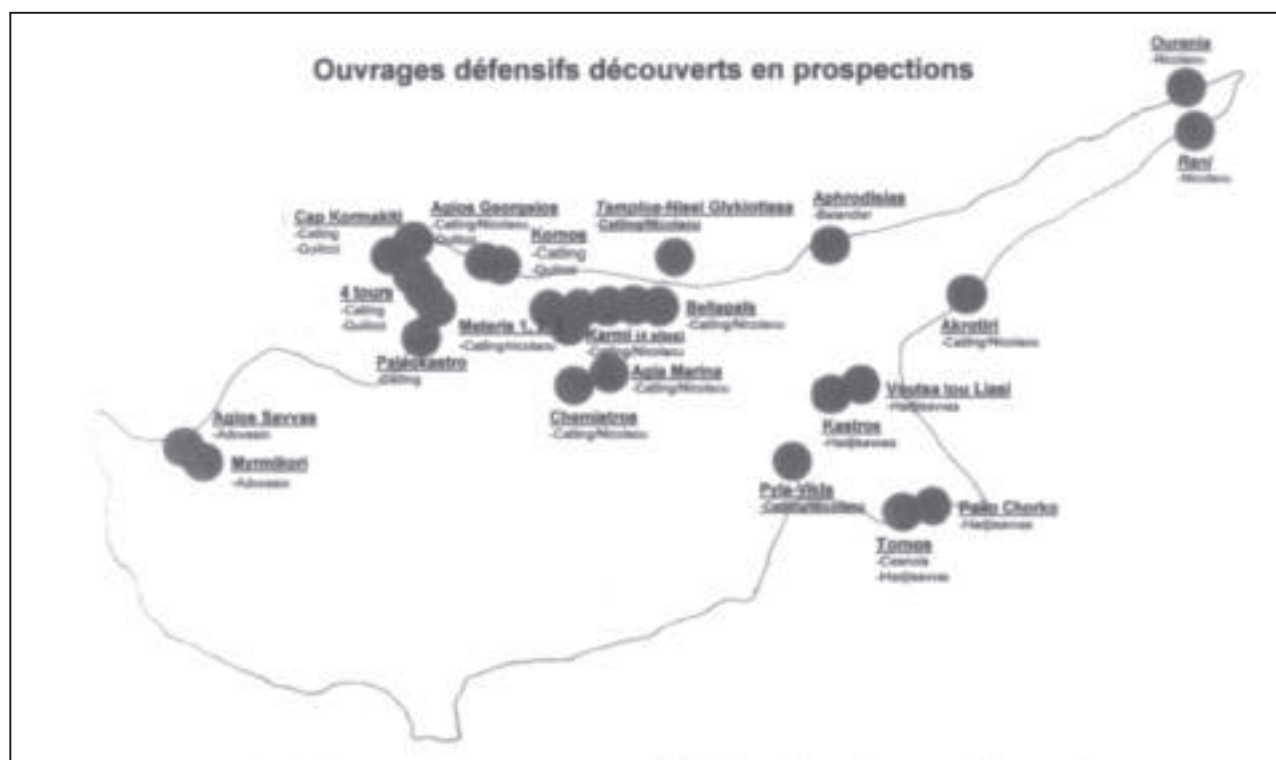


Fig. 3 Carte de répartition des ouvrages défensifs révélés par les prospections au sol (extrait de Balandier 2011a, fig. 3 pl. 40).

stratigraphique appropriée peut permettre d'obtenir une datation absolue. Après lecture de tous les rapports de fouilles et après avoir procédé à une description architecturale ainsi qu'à l'analyse des techniques de construction de chaque ouvrage fortifié, il a été possible de proposer un tableau de répartition chronologique de ces ouvrages fortifiés par période (tableau 2).

1.1.3. L'interprétation historique des résultats

Tels étaient les premiers résultats de l'enquête de l'historien. Il fallait ensuite essayer d'interpréter et d'expliquer ces différences. Ce fut l'objet de la synthèse historique de cette recherche doctorale dont les résultats ont été publiés.⁵ Aussi, je ne reviens pas dessus.

1.2. LE CAS DE LA SYRIE-PALESTINE

C'est la même approche méthodologique que j'ai conduite pour étudier l'organisation défensive de la Syrie-Palestine de l'époque perse à l'époque lagide, sur la côte voisine de Chypre, à l'ouest du Jourdain (Cisjordanie).

Cela m'a permis de replacer les phénomènes observés sur le terrain, à Chypre comme en Palestine, dans une perspective plus large, macro-régionale. Les fouilles archéologiques s'étant particulièrement développées en Syrie-Palestine, au cours des vingt dernières années, notamment sur les ouvrages fortifiés, il m'a semblé intéressant de reprendre la réflexion que M. Dunand avait commencé, il y a 45 ans, sur la défense de ce qu'il appelait le front méditerranéen de l'empire perse et d'essayer de compléter l'inventaire des fortifications hellénistiques de la région que P. Leriche avait dressé il y a 30 ans.⁶

1.2.1. Inventaire et analyse des vestiges fortifiés

Pour la Cisjordanie, les textes, là aussi, apportent peu et le corpus épigraphique concernant l'administration militaire ou le réseau défensif est presque inexistant. Les vestiges de fortifications prennent donc toute leur valeur pour l'historien de la défense. Les ouvrages fortifiés doivent en effet être traités comme toute source historique : il faut donc rassembler le maximum de documents, en procédant à une prospection de la

⁵ Balandier 2007 et Balandier 2011a.

⁶ Dunand 1968, 43-4 et Leriche 1986, 39.

Tableau 2 Ouvrages fortifiés attestés par les prospections ou les fouilles archéologiques (Balandier 2007, 146–7).

PÉRIODE CHYPRO- GÉOMÉTRIQUE	PÉRIODE CHYPRO-ARCHAÏQUE		PÉRIODE CHYPRO-CLASSIQUE		PÉRIODE HELLÉNISTIQUE	HAUT-EMPIRE I ^{er} -II ^e siècles	III ^e -IV ^e siècles	PÉRIODE PROTO- BYZANTINE VII ^e siècle
	CA I CA I	CA II CA II	CCI	CCII				
Salamine : construction de la 1 ^{ère} enceinte au XI ^e siècle	Salamine : reconstruction de l'enceinte au VIII ^e siècle	Tamassos : construction de la 1 ^{ère} enceinte	Idalion : 1 ^{ère} enceinte de la ville haute	Marion : construction du rempart oriental (1 ^{ère} enceinte ?)	Paleokastro (Ayia Ilini) : construction de l'enceinte (fin du IV ^e siècle)	Amathonte : rempart nord : restauration de la face interne	Lapethos : reconstruction de l'enceinte	Amathonte : construction du rempart médian (versant sud de l'acropole)
Kourion- Bamboula : construction de la 1 ^{ère} enceinte	Palaepaphos : construction de la 1 ^{ère} enceinte (2 ^e moitié du VIII ^e siècle)	Salamine : reconstruction de l'enceinte au VIII ^e siècle ?	Amathonte : reconstruction de l'enceinte	Palaepaphos : reconstruction de l'enceinte	Palaepaphos : reconstruction de l'enceinte	Amathonte : restauration de l'enceinte au nord et au sud ?	Nea Paphos : tour circulaire près du port	Constantia (Salamine) : construction de l'enceinte réduite
Idalion : reconstruction de l'enceinte de l'Âge du Bronze	Kourion-Bamboula : reconstruction de l'enceinte	Kition-Bamboula : construction de l'enceinte	Tamassos 2 : construction d'une nouvelle enceinte	Golgoi : construction du rempart oriental (1 ^{ère} enceinte ?)	Nea Paphos : construction de la 1 ^{ère} enceinte (ca. 200) ?	Nea Paphos : tours au nord du rempart ouest (II ^e siècle)	Ledra : construction de l'enceinte	Karpasia : construction de la 1 ^{ère} enceinte
Kition-Kathari : reconstruction de l'enceinte	Idalion : 1 ^{ère} enceinte englobant les deux collines	Kourion- Bamboula : reconstruction : tour ?	Vouni : enceinte contemporaine du palais ?	Pyla-Vikla : promontoire barré	Geronissos : construction d'une enceinte ?	Soloi : remaniements : construction de la porte nord-est		Aphendrika (Karpasse) : refuge ? fortin ?
		Idalion : restauration de l'enceinte	Akrotiri (Karpasse) : construction de la 1 ^{ère} enceinte ?	Chelones-Rani (Karpasse) : éperon barré ?	Amathonte : reconstruction des secteurs sud-ouest et nord ?	Pallo Chorko (Mana tou nerou): enceinte		Amathonte : porte du rempart médian sur l'acropole condamnée. Mur précaire construit à l'est de l'agora
		Amathonte : construction de la 1 ^{ère} enceinte			Kourion : poterne au nord-ouest ?	Tornos (Makronisos) : enceinte vue par L. Cesnola.		Templos (îlot de Glykiotissa, Kyrenia) : poste d'observation
		Kourion 1 : construction de la 1 ^{ère} enceinte			Paleokastro (Ayia Ilini) : remaniement de l'enceinte et construction de deux tours ?	Mazeri (chaîne de Kyrenia) : poste d'observation		Keryneia (Kyrenia) : 1 ^{ère} enceinte byzantine
		Soloi 1 : construction de la 1 ^{ère} enceinte ?			Kornos (Orga) : construction de l'enceinte	Chemistros (Mesaoria) : fortin		Nea Paphos : construction d'une forteresse (garnison arabe) ?

			Palaepaphos : reconstruction de l'enceinte			Aghios Georgios (Kornos) : cons- truction de la cité sur le promontoire (tour et citerne)			Passe de Kyrenia : poste d'observation
						Cap Kormakiti : tour			Meteris 1 (chaîne de Kyrenia) : poste
						Meredjin (Kormakiti) : tour			Meteris 2 (chaîne de Kyrenia) : poste
						Lithratis (Kormakiti) : tour			Meteris 3 (chaîne de Kyrenia) : poste
						Papavasili (Kormakiti) : tour			Moutte tou Mavrou (chaîne de Kyrenia) : poste
						Alakati (chaîne de Kyrenia) : poste défensif			Kambidia (chaîne de Kyrenia) : poste
						Myrmikori (Chrysochou) : agglomération fortifiée ?			Chelones-Rani ? épéron barré
						Ayios Mamas (Chrysochou) : poste de guet			Geronisos : tour ?
						Savvenas (Mesaoria) : poste			Aphrodision (Akanthou) : 1 ^{ère} enceinte ?
						Voutsas tou Lias (Famagouste) : fortin ou habitat fortifié ?			
						Kastros (Famagouste) : habitat fortifié			

région, à une compilation des rapports des fouilles qui ont pu être menées sur telle ou telle fortification afin d'établir le catalogue et la chronologie des sites fortifiés. Ensuite, l'analyse descriptive de chaque site, sur le terrain, constitue une étape fondamentale de ce travail, car elle permet de mettre en évidence les étapes de construction de l'enceinte et de se procurer des éléments de datation relative, mais aussi absolue si une fouille stratigraphique a pu être conduite, et ces résultats chronologiques peuvent donc servir à d'éventuelles comparaisons régionales.

Ainsi, pour chaque site de Cisjordanie, une fiche analytique a été mise au point, destinée à synthétiser les données sur chaque site fortifié. Celle-ci présente la localisation du site, l'historique de la recherche, le type d'ouvrage fortifié (enceinte urbaine, forteresse, tour isolée, etc.), la description des vestiges de cet ouvrage, une synthèse des phases chronologiques du bâtiment ainsi que la bibliographie relative à l'ouvrage fortifié.⁷

Après avoir éliminé de notre corpus les sites dont la fonction défensive ou la datation n'étaient pas assurées, j'ai pu inventorier 60 sites fortifiés d'époque perse ou lagide en Cisjordanie.

1.2.2. Cartographier et dater les vestiges : de la géographie historique à l'interprétation historique des fortifications

Il faut savoir que toute la difficulté dans cette région réside dans le fait que, pendant longtemps, les périodes achéménide et hellénistique n'ont pas été distinguées. Or, le travail d'inventaire et d'analyse m'a permis non seulement de distinguer les sites d'époque perse de ceux de l'époque hellénistique, mais également de tenter de procéder à des distinctions chronologiques à l'intérieur même de ces périodes. Il devenait alors possible d'établir une cartographie de la défense du territoire période par période, chaque carte donnant ainsi l'état de nos connaissances du contrôle défensif d'une région à une

période donnée. La longueur de ma contribution étant limitée, je ne présente ici que la carte de synthèse (Fig. 4).

Ainsi, on voit se dessiner la géographie historique de l'organisation défensive de ce territoire. L'étude précise de chacun des sites fortifiés doit ensuite être suivie d'une réflexion sur les relations de ces ouvrages fortifiés les uns par rapport aux autres. C'est alors que prend place l'interprétation historique qui tient compte aussi bien de la nature du site que de la chronologie. L'étude de l'évolution historique des politiques défensives est alors possible. Mon propos n'est pas de donner ici les résultats historiques obtenus ; je renvoie à la publication et à la revue *Transeuphratène*, pour ce qui concerne la période achéménide, ainsi qu'à une réflexion régionale sur la complémentarité de la côte phénicienne, du Nord du Sinaï et de Chypre dans les politiques défensives des souverains saïtes et perses.⁸

Le constat que l'on peut faire aujourd'hui est que l'on se trouve dans une situation paradoxale où les fortifications sont beaucoup mieux connues dans les régions périphériques du monde grec, tandis que les ouvrages fortifiés de Grèce propre demeurent les plus mal datés. Ceci explique probablement qu'à l'exception de l'Attique ou de la plaine de Salganeus,⁹ aucune région de Grèce n'avait fait jusque-là l'objet d'une réflexion historique sur les politiques défensives qui avaient pu y être mises en œuvre au cours du temps. Depuis vingt ans, après avoir été les oubliées de la recherche archéologique, les fortifications de Grèce commencent à être mieux connues. Des études monographiques sont parues récemment (par exemple sur les fortifications urbaines de Dion, de Rhodes, de Thasos),¹⁰ et des fouilles ont repris sur l'Aspis d'Argos ou l'enceinte de Messène.¹¹

Il est donc possible désormais de mener des études régionales sur l'organisation défensive des territoires, puisque l'on dispose de quelques jalons chronologiques, certaines enceintes ayant été datées grâce aux fouilles stratigraphiques. Nous allons ainsi voir maintenant

⁷ Notons qu'I. Pimouguet-Pédarros élabore, avec la collaboration technique de J.-B. Houal, une banque de données sur les fortifications antiques qui devrait être mise en ligne sur le site du laboratoire d'archéologie de l'École Normale Supérieure « Archéologie d'Orient et d'Occident et Textes Anciens » (UMR 8546 CNRS-ENS) : www.archeo.ens.fr. Cette banque de données recense et décrit chaque ouvrage fortifié : elle a pour objectif d'être enrichie par les contributions des chercheurs travaillant sur les fortifications de telle ou telle région du monde gréco-romain.

⁸ Balandier 2009 ; Balandier 2011b et Balandier 2014.

⁹ Ober 1985 et Bakhuizen 1970.

¹⁰ Stephanidou-Tiberiou 1998 ; Filimonos-Tsopotou 2004 ; Grandjean 2011 ; Fachard 2012.

¹¹ Sur l'Aspis d'Argos, l'enceinte de l'Âge du Bronze a été fouillée il y a peu (voir la communication d'A. Touchais) dont S. Fachard reprend l'étude des vestiges d'époque classique. S. Müth a conduit récemment des fouilles sur l'enceinte de Messène dont J.-C. Bessac a étudié les techniques de construction.

comment les fortifications peuvent dès lors être fort utiles pour étudier l'histoire défensive d'une région.

2. L'étude des fortifications au service de l'Histoire : exemples de recherches en cours

L'historien du monde grec se pose régulièrement la question de la façon dont une cité, une confédération ou un souverain contrôle son territoire civique ou son royaume. Ce contrôle passe, la plupart du temps, par la mise en défense de ce territoire. L'étude de l'organisation défensive de ce territoire permet donc à l'historien de réfléchir à la stratégie défensive mise en œuvre, aux valeurs véhiculées par les choix stratégiques des différentes puissances, à l'impact non seulement politique, mais aussi sociologique, économique, psychologique que ces choix stratégiques ont pu avoir sur les hommes vivant sur ces territoires. Voyons quelques exemples de recherches en cours à l'Université d'Avignon où s'est constitué, au cours de ces dernières années, un groupe de travail sur l'histoire de la défense de différentes régions de Grèce. Après la présentation générale d'études historiques régionales, nous verrons comment ces études régionales de fortifications viennent enrichir la réflexion historique et contribuent à répondre à certaines problématiques précises.

2.1. ÉTUDES HISTORIQUES RÉGIONALES DE LA DÉFENSE DES TERRITOIRES

Ainsi, je vais présenter brièvement l'étude du réseau fortifié de l'Argolide que je conduis moi-même, puis certains des résultats historiques obtenus auxquels ont abouti d'une part l'étude de la défense de la Béotie et, d'autre part, celle de l'Achaïe.

2.1.1. L'exemple de l'Argolide

L'Argolide n'a effectivement jamais été étudiée sous l'angle de l'histoire de la défense de la région, en dépit du nombre important d'ouvrages fortifiés que l'on peut y inventorier (Fig. 5). Si la cité d'Argos s'est préoccupée de défendre ses abords immédiats, elle a également cherché à éviter toute incursion ennemie depuis les côtes méridionale

et orientale de la péninsule en implantant une série de points fortifiés sur la côte ou à l'intérieur des terres. Sur le littoral, on trouve ceux-ci à Hermione, Halieis, Eileoi, Trézène, Méthana,¹² et à Épidaure. À l'intérieur, des points fortifiés ont été implantés à Kazarma et Kastraki, sur la route menant d'Épidaure à Nauplie puis Argos, ainsi qu'au nord, sur la route de Némée, au débouché de celle-ci dans la plaine argienne. Enfin, certains ont été identifiés au sud-ouest sur la route de Tripolis à Hysiai. On notera également la présence de deux constructions « de forme tronc-pyramidale » à Kephalaria et Ligourio, le plus souvent interprétées comme des tours.¹³

Je n'ai pas la place de développer ici cette étude en cours, mais je peux déjà dire qu'en quelques siècles, la défense d'Argos est passée d'une conception très restreinte, la seule enceinte urbaine, dès la fin de l'époque archaïque semble-t-il, à une organisation défensive plus raisonnée, et surtout plus hiérarchisée, entre, d'une part, la côte, limite du territoire de la cité au nord et au sud-est et, d'autre part, l'intérieur de la péninsule et les abords de la ville. Il conviendra, évidemment, de se demander ce qui a provoqué la mise en place de cette politique défensive rationnelle du territoire. On peut déjà émettre l'hypothèse selon laquelle la reconstruction probable de l'enceinte d'Argos à l'époque hellénistique,¹⁴ ainsi que le réaménagement tactique de la défense de l'Argolide reconquise, ont été envisagés dans le contexte des luttes entre, d'un côté, la ligue achaïenne, qu'Argos intégra dès 229 av. J.-C., et, de l'autre, Sparte ou la ligue étolienne. On voit combien l'exemple de l'Argolide semble prometteur pour étudier l'évolution des stratégies défensives d'une cité et d'une région. Cette étude devrait également aider à préciser la chronologie de la reconquête des territoires reconquis par Argos. Après l'installation par les Spartiates, au V^e siècle av. J.-C., d'une tour de guet sur le sommet du Zavitsa (Parparos) qui dominait la plaine d'Argos et le golfe de l'Argolide, puis l'installation des Éginètes dans la plaine de Thyréa, un peu plus au sud, les Argiens décidèrent de s'allier à Athènes et de faire valoir leurs droits sur la Cynourie. Peut-être cette recherche permettra-t-elle, par exemple, de vérifier d'une part si la série de tours implantées au nord de la Cynourie, à la frontière avec la Laconie, n'était pas destinée à prévenir toute menace lacédémonienne¹⁵ et,

¹² McAllister 2005, Frickenhaus & Müller 1911, 28 et Jameson *et al.* 1994.

¹³ Lord 1939, 80 et Papachatzis 2004², 182 fig. 184-9 et 204-5, repris par Adam 1982, 72 et 74-6. Les fondations et la base de ces constructions sont constituées d'assises aux parements verticaux, mais les faces de l'élévation, conservées jusqu'à 5 m à Képhalaria, sont inclinées de 60° C. Notons que Pausanias (2.25.7) considérait ces constructions comme des monuments funéraires.

¹⁴ La reprise des fouilles des fortifications de l'Aspis par S. Fachard devrait permettre de préciser la chronologie des remaniements du système défensif d'Argos.

¹⁵ Phaklaris 1990, 201-8.





Fig. 5 Villes fortifiées (•) et forts (o) en Argolide (conception Cl. Balandier, réalisation E. Rossignol).

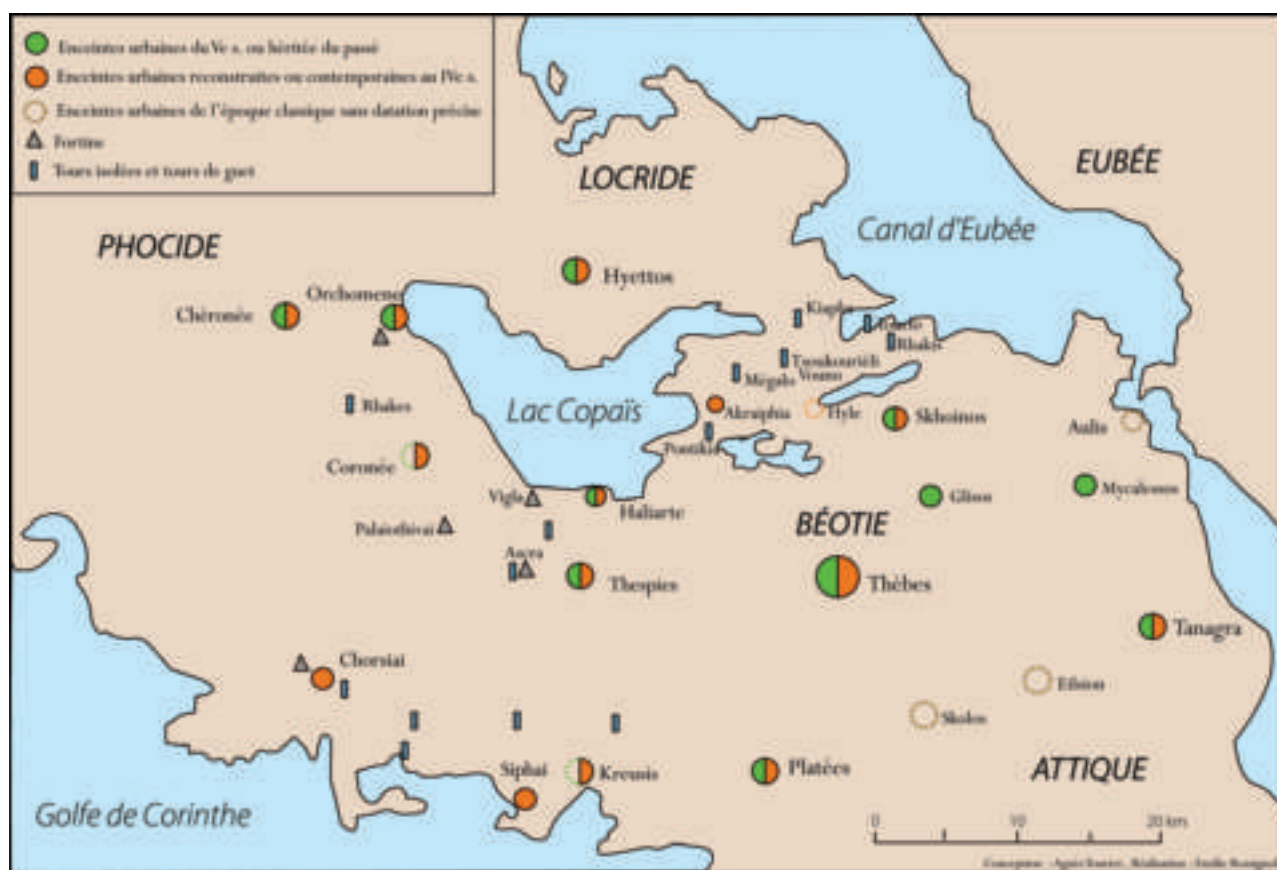


Fig. 6 Carte de répartition des différents ouvrages fortifiés sur le territoire béotien à l'époque classique (conception A. Tourtet, réalisation E. Rossignol).

d'autre part, de préciser la date à laquelle Argos a repris le contrôle de la Thyréatide, région de contact entre Argolide, Arcadie et Laconie. « On affirme souvent que les Argiens reçurent en plus de la Thyréatide, toute la côte jusqu'à Zarax. Mais vers 275 av. J.-C., le petit port de Tyros, situé au nord de Zarax, appartient aux Laconiens. Les Argiens n'obtinrent sans doute la Cynourie que plus tard, comme une récompense de leur fidélité à Antigonos Gonatas ».¹⁶ L'étude des ouvrages fortifiés de ce secteur de discordes entre Sparte et Argos devrait apporter des éléments chronologiques complémentaires.¹⁷ Quoi qu'il en soit, j'espère être en mesure de proposer une première synthèse historique sur la défense de l'Argolide lors de la table ronde sur la défense des cités grecques qui se tiendra à l'Université d'Avignon prochainement.

Les autres travaux que j'ai mentionnés ont permis de montrer comment les stratégies défensives des cités grecques, longtemps réduites à l'affrontement hoplitique en terrain plat, ont été repensées au cours de la période classique et comment ont été élaborées de véritables réflexions de défenses régionales. Je présente ici rapidement quelques exemples, en Achaïe, en Béotie et en Thessalie.

2.1.2. L'exemple de la Béotie

La recherche conduite en Béotie par Agnès Tourtet¹⁸ montre ainsi que, si seule Thèbes était fortifiée au début de la période classique, d'autres cités se sont progressivement dotées d'une enceinte au cours du Ve siècle av. J.-C., telles Orchomène, Chéronée, Thespies, Platées ou Tanagra (Fig. 6). Bien que ces cités soient alliées dans le cadre de la première Confédération béotienne, A. Tourtet a montré que la défense de la Béotie ne semble pas avoir été l'objet, au Ve siècle, d'une réflexion globale, mais a été le résultat d'initiatives ponctuelles, individuelles, des cités. Seules les frontières méridionales de la Béotie semblent avoir alors préoccupé la Confédération.

En revanche, un changement stratégique et politique important s'observe au IV^e siècle. Ainsi, l'inventaire et l'étude des ouvrages fortifiés, de même que leur répartition sur le territoire de la Béotie, montrent que de nombreuses fortifications isolées ont été érigées

au IV^e siècle, tours de guet et forts. La similarité de la conception et des techniques de construction de ces ouvrages, ainsi que des enceintes qui ont été remaniées ou érigées à cette période, montre une réflexion stratégique d'ensemble, conduite sur tout le territoire de la Béotie. Désormais, les enceintes urbaines ne sont pas isolées et ne sont plus destinées à défendre uniquement l'*ἄστυ* de la cité qui les a érigées, mais elles appartiennent à un réseau défensif réfléchi, à une organisation défensive régionale mise en place dans le cadre de la deuxième Confédération béotienne.

Ce quadrillage défensif et hiérarchisé de l'intérieur de la Béotie mis en place au IV^e siècle n'a pas évité de renforcer aussi la défense des frontières. Les Béotiens ont ainsi recouru à deux moyens : d'une part à l'édification de solides forteresses, telles celles d'Éleuthères et d'Aegosthènes, à leur frontière avec l'Attique, d'autre part à l'annexion de cités étrangères (Chorsiai, Siphai...) qu'ils ont fortifiées aux confins occidentaux de leur territoire face à la Phocide et à la Mégaride.

Enfin, convaincue par son stratège Épaminondas de la nécessité de se doter d'une flotte importante, la deuxième Confédération béotienne a procédé à la mise en place d'un réseau fortifié à l'est du lac Copaïs, dans la région des lacs de Paralimni et de Likéri, autour de la baie de Skroponéri, de façon à contrôler l'accès terrestre et maritime à celle-ci. Cette rade, située entre les cités d'Anthédon et de Larymna, devint la base navale de Thèbes et de ses alliées à partir de 366-65, comme l'avait déjà supposé J.M. Fossey.¹⁹ L'étude d'A. Tourtet souligne que la politique maritime d'Épaminondas fait partie d'une réflexion d'ensemble du stratège thébain et de la Confédération sur la défense de la Béotie et que celle-ci s'étendait non seulement à l'ensemble de la région, mais aussi à l'extérieur des frontières béotiennes.

2.1.3. L'exemple de l'Achaïe

L'inventaire des fortifications d'Achaïe effectué par ailleurs par Guillaume Coulon a permis de montrer que c'est à partir du moment où la seconde Confédération des cités de cette région a été proclamée qu'elle a dû revoir son organisation défensive et contrôler un certain

¹⁶ Piérard & Touchais 1996, 61 note 56. Les résultats des fouilles d'une nécropole au lieu-dit Helleniko, considéré comme le site de l'ancienne Éua, en Thyréatide, semblent pouvoir confirmer cette hypothèse, de même que celle d'un petit temple qui pourrait matérialiser un point de la nouvelle frontière méridionale du territoire argien. On peut se demander s'il s'agit d'un sanctuaire de frontière.

¹⁷ Christien 1985 et 1987.

¹⁸ Tourtet 2008.

¹⁹ Fossey 1979.



Fig. 7 Répartition des ouvrages fortifiés inventoriés en Achaïe (conception G. Coulon, fond de carte d'après Rizakis 1992, pl. XII).

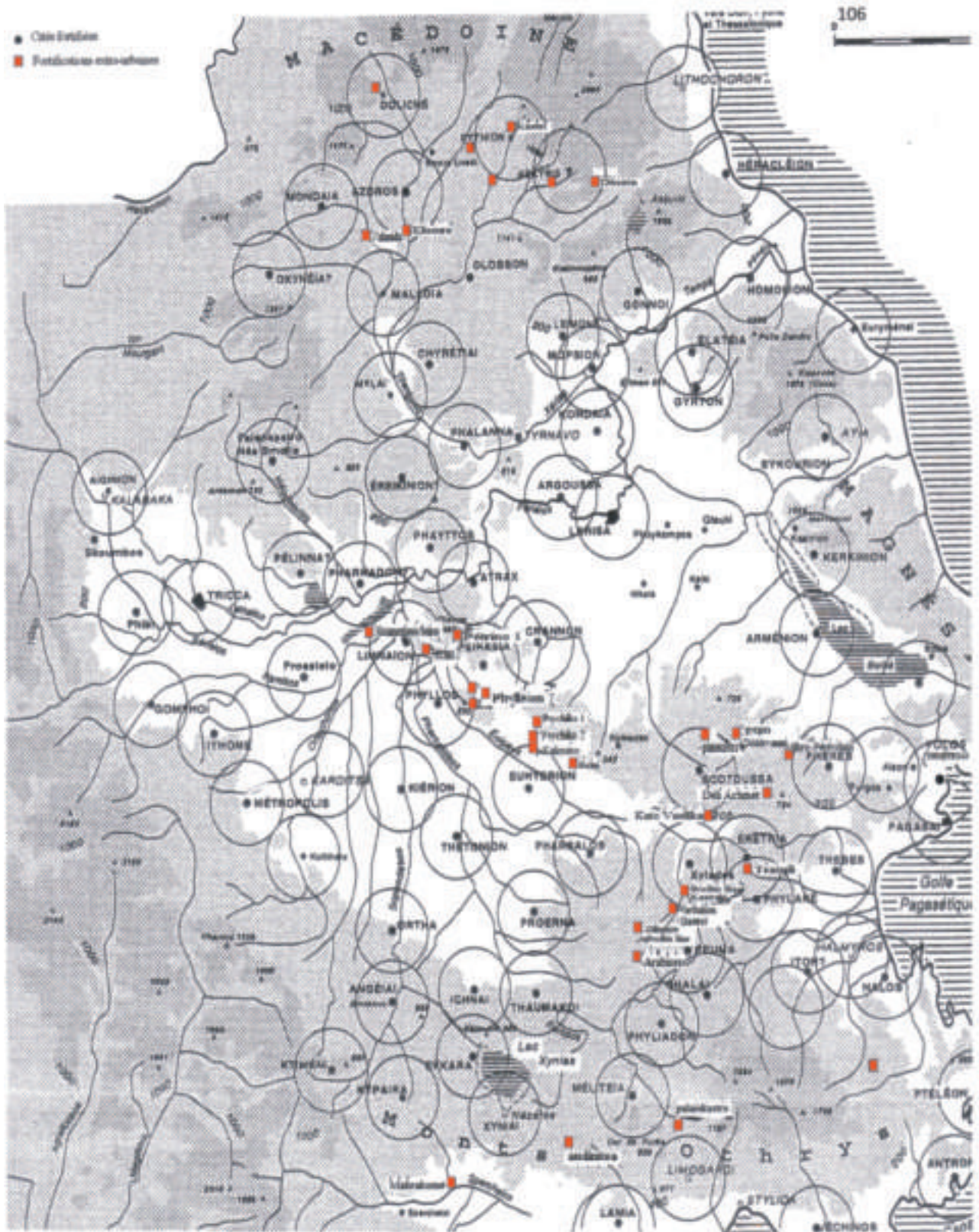


Fig. 8 Carte des fortifications extra-urbaines de Thessalie et des régions périèques (d'après G. Rauner 2010, 106, fond de carte d'après Helly 1995, 92).

nombre de points stratégiques.²⁰ La Confédération s'est en effet retrouvée impliquée dans de nombreux conflits avec ses voisins et la répartition des places fortes et des travaux de mise en défense à travers l'Achaïe traduit la stratégie défensive qu'elle a alors mise en œuvre pour protéger la région (Fig. 7). Ainsi, les places de Kalogria/*teichos* des Dyméens et Karavostasi (nos 1 et 2 et sur la carte) devaient prémunir l'ouest achaïen de tentatives d'agression éléo-étoliennes, tandis que les forteresses et cités de Léontion, Koutéli Vryssariou et Planitérou (nos 12, 6 et 7) devaient couvrir les défilés menant vers l'Arcadie contre d'éventuelles entreprises lacédémoniennes. Les tours de guet et les implantations côtières permettaient de défendre le littoral en donnant l'alerte. Comme cela a pu être observé en Attique par J. Ober, le réseau défensif achaïen, de façon certes plus modeste, est donc constitué de villes fortifiées, de forteresses, de petits fortins et de tours de guet, de façon à contrôler le territoire plus efficacement. Il est alors possible pour les Achaïens de se prémunir des invasions tout en se donnant les moyens d'effectuer des contre-attaques à partir de ces points d'appui territoriaux et, probablement, de défendre aussi leurs productions agricoles.

2.2. L'APPORT DE L'ÉTUDE DES FORTIFICATIONS RÉGIONALES À DES PROBLÉMATIQUES PRÉCISES

L'étude régionale des fortifications peut aider à nourrir la réflexion sur telle ou telle problématique historique, ainsi le rapport des cités à leurs ports et le rôle des villes périèques dans la défense du territoire d'une cité.

2.2.1. La défense des cités et de leurs ports

Dans la réflexion sur les politiques défensives des cités, le rapport des cités grecques avec leurs ports me semble également extrêmement intéressant. La politique de fortification des ports, intégrés dans l'enceinte de la ville par le prolongement des môles ou par la construction de longs murs, répond à une stratégie défensive qui s'est développée en Grèce à l'époque classique, mais pas seulement. Il semble utile de reprendre la réflexion sur l'origine de la fortification des ports, tel celui de Thasos, fortifié semble-t-il depuis le Ve siècle av. J.-C., ou celui du Pirée, qui a fait l'objet de plusieurs programmes de fortifications sous l'archonte Thémistocle au début du Ve siècle av. J.-C., puis au début du siècle suivant sur proposition de l'amiral Conon. Le choix de recourir à

des longs murs, célèbres à Athènes et à Corinthe, mais érigés également en d'autres lieux (Mégare, Argos, Patras, Oiniadai), n'est-il que le moyen trouvé par les cités éloignées de leur port de protéger celui-ci, ou traduit-il un changement de stratégie dans l'organisation défensive d'un territoire ? La recherche que nous avons suggérée sur ce sujet, conduite par Jade Reigner, a notamment montré que ces constructions font en fait partie de la politique défensive mise en œuvre par Périclès, assisté d'Alcibiade, pour se protéger des alliés de Sparte et mieux défendre l'Attique en utilisant les ports des cités alliées voisines.²¹

2.2.2. Le rôle des cités périèques dans la défense régionale : le cas de la Thessalie

L'étude des cités périèques doit être également reprise, me semble-t-il, dans la réflexion sur la défense de telle ou telle région. Je prends l'exemple de l'histoire de la défense de la Thessalie, sujet de la thèse de Gauthier Rauner.²² Ce dernier montre que si certaines cités de Thessalie étaient pourvues d'une enceinte dès l'époque archaïque, c'était pour se protéger de la menace d'invasions venues du nord, mais aussi des territoires périèques, c'est-à-dire habités par des populations chassées de leurs terres thessaliennes d'origine. À l'époque classique, les cités de Thessalie exerçaient leur contrôle sur de nombreuses régions périèques, telles la Dolopie, l'Achaïe Phthiotide et la Perrhébie, qui devaient payer un tribut et fournir des contingents.

C'est au IV^e siècle av. J.-C., lorsque la dynastie de tyrans qui régnait à Phères a tenté de prendre le contrôle de toute la Thessalie, que la plupart des cités thessaliennes se sont dotées d'une enceinte et que des ouvrages fortifiés isolés ont été érigés dans les terres (Fig. 8). On constate que, d'un côté, le tyran a mis en place un réseau défensif sur le territoire de Phères et, de l'autre, les cités thessaliennes, ainsi que quelques cités périèques, ont cherché à se défendre des agressions de ce même tyran. À la période hellénistique, ces cités périèques ont alors joué un rôle aussi important que les cités thessaliennes proprement dites dans l'organisation défensive de la grande plaine centrale de la Grèce. Il s'agissait probablement autant de défendre la population et ses moyens de subsistance que la Thessalie proprement dite.

Cependant, si les cités thessaliennes, d'abord alliées puis soumises aux Macédoniens, ont pu servir la politique

²⁰ Coulon 2011.

²¹ Reigner 2012 et thèse à venir sur les ports fortifiés.

²² Rauner 2010.

de ces derniers qui y ont renforcé les fortifications puis implanté des garnisons, les cités périèques ont été plus difficiles à contrôler. Les fortifications qui les protègent ont été datées autour de 300 av. J.-C. Selon J.-N. Corvisier, les fortifications de Dolopie, par exemple, auraient pu être érigées à la demande des Antigonides contre les incursions de la Confédération étolienne ou du roi d'Épire Pyrrhos qui leur disputait le trône macédonien ; G. Rauner émet l'hypothèse qu'elles l'ont été par les Étoliens. Beaucoup de cités périèques, en effet, pour ne pas avoir à se soumettre aux Macédoniens, ont recherché l'alliance de la Confédération étolienne. Or, la Dolopie, qui servait de base avancée pour des incursions contre les Macédoniens, était stratégiquement beaucoup plus importante pour la Confédération étolienne que pour les Antigonides, c'est pourquoi l'hypothèse de G. Rauner semble tout à fait convaincante. On voit bien ici comment l'étude de la défense d'une région et de la prise en compte de toutes ses composantes peut déboucher sur l'histoire politique.

Les villes périèques ont également joué un rôle important au sud de la Grèce : ainsi, en Laconie, elles ont été intégrées au réseau défensif de Sparte, comme l'a développé Matthieu Guintrand.²³

L'organisation défensive d'une région reflète, on l'a dit, les conceptions stratégique et politique de la cité ou de la société qui l'a mise en œuvre et témoigne donc du rapport que cette société entretient avec son territoire. Par cette approche méthodologique, j'espère avoir ainsi montré que l'étude régionale des fortifications permet, à condition d'être replacée dans une perspective historique, de distinguer des aspects strictement locaux, liés au contrôle d'une région précise, de ceux qui ressortent d'une politique plus ample mise en œuvre par tel ou tel pouvoir sur l'ensemble des territoires que celui-ci gouverne. On peut espérer que ce type d'étude historique régionale va se développer à l'ensemble du monde grec, telles les thèses récemment soutenues, consacrées aux fortifications des Cyclades, de la Crète ou de l'Érétrie,²⁴ et permettre ainsi des comparaisons régionales.

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²³ Voir la contribution de M. Guintrand dans ce même volume ainsi que Guintrand 2010 et sa thèse en cours : *La défense de la Messénie et de la Laconie de la fin du VII^e siècle au milieu du II^e siècle avant J.-C. Étude d'histoire politique*, thèse de doctorat, Université d'Avignon et des Pays de Vaucluse (dir. C. Balandier).

²⁴ Louyot 2005, Coutsinas 2013, Maher 2012 et Fachard 2012. L'étude conjointe des fortifications rurales et de la *chôra* d'Érétrie est un modèle du genre. S. Fachard rappelle la nécessité de ne pas interpréter systématiquement les ouvrages fortifiés disséminés sur un territoire comme faisant partie d'une stratégie militaire, mais d'un dispositif défensif dont ont pu se doter les habitants de la *chôra* pour se protéger eux-mêmes et les produits stockés de leurs récoltes en cas d'invasion : « une communauté peut se fortifier d'abord pour se protéger elle-même, sans que cette volonté de se défendre n'entre dans un plan stratégique élaboré à l'échelle d'un territoire » (Fachard 2012, 241). Voir mon compte-rendu dans *AJA* 117.4, October 2013 (<http://www.ajaonline.org/online-review-book/1678>). Pour Coutsinas 2013, compte-rendu à paraître dans la *RA* 2015.

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LES FORTIFICATIONS DANS LE SYSTÈME DÉFENSIF LACÉDÉMONIEN À L'ÉPOQUE CLASSIQUE*

Matthieu Guintrand

Résumé

La question de la défense de la Laconie à l'époque classique a été le plus souvent réduite à sa plus simple expression : en cas d'attaque, l'armée spartiate se portant au devant de l'ennemi aurait défendu son territoire uniquement par un combat hoplitique en rase campagne. Pourtant, une lecture attentive des auteurs antiques, Thucydide et Xénophon en particulier, nous présente un tableau plus contrasté. Il ne fait aucun doute que, dès cette époque, les fortifications faisaient partie du paysage lacédémonien et que les périèques sont à l'initiative de leur construction. À partir des premiers résultats de la recherche que nous menons en thèse de doctorat sur la défense de la Laconie et de la Messénie aux époques classique et hellénistique, nous abordons le moment où les Lacédémoniens ont décidé de construire des ouvrages fortifiés sur leur territoire, afin de montrer le rôle et la fonction de ces supports techniques défensifs. Après avoir apporté des précisions chronologiques sur l'apparition de ces ouvrages défensifs, nous menons une réflexion sur la place de ceux-ci dans le système défensif préexistant de la Laconie, ainsi que sur leur efficacité. Nous montrons pourquoi les villes périèques se sont dotées de fortifications et pourquoi les Spartiates, réputés hostiles aux ouvrages fortifiés, ont autorisé leur construction sur leur propre territoire.

Il peut paraître singulier de s'interroger sur la place des fortifications dans le système défensif lacédémonien à l'époque classique,¹ puisque Sparte est une cité célèbre pour avoir été farouchement hostile à l'idée d'avoir recours à des remparts pour assurer sa défense durant

cette période.² La cité lacédémonienne aurait préféré qu'aucune ville grecque ne soit pourvue d'une enceinte (Thuc. 1.901) et que les Grecs ne se réfugient pas derrière leurs remparts pour se défendre. Plusieurs apophtegmes lacédémoniens très connus relayent cette idée, mais le

* Je tiens à exprimer ma gratitude aux organisateurs du colloque *Fokus Fortifikation* pour m'avoir permis de participer à ce colloque sur les fortifications. Cette communication est issue des premiers résultats de ma thèse de doctorat qui porte sur l'histoire de la défense de la Laconie et de la Messénie de la fin du VII^e au II^e siècle av. J.-C. à l'Université d'Avignon et des Pays de Vaucluse, sous la direction de Claire Balandier, que je remercie grandement pour son soutien. Certains thèmes développés ici sont susceptibles d'être précisés par la suite.

¹ Sauf indication contraire, toutes les dates sont avant notre ère.

² J'ai pris le parti de m'arrêter en 370 av. J.-C., c'est-à-dire après l'invasion des territoires lacédémoniens par Thèbes et leurs alliés, qui bouleverse l'organisation territoriale du sud du Péloponnèse. À partir de cette date, Sparte perd progressivement le contrôle d'une grande partie de son territoire, en particulier la Messénie où la nouvelle Messène est fondée sur les pentes du mont Ithôme, voir Christien 2000.

plus explicite, en termes laconiques, revient à Agésilas qui, en montrant son armée, aurait lancé : « voilà les remparts de Lacédémone » (Plut. *Ap. Lac.* 210e). Ce thème traditionnel de l'idéologie spartiate a été véhiculé par un certain nombre de philosophes ou d'orateurs, tels Platon et Isocrate, et a contribué au développement de ce que François Ollier³ a appelé le « mirage spartiate », qui est une idéalisation, voire une caricature, de la société spartiate.

Fidèle à cette idéologie, la ville de Sparte ne possédait effectivement pas d'enceinte urbaine à l'époque classique, et elle n'en posséda pas avant le III^e siècle.⁴ Toutefois, cette idée préconçue qui veut que les Spartiates aient été hostiles aux fortifications doit être nuancée. Une lecture attentive des auteurs antiques permet de dresser un tableau plus contrasté, car il ne fait aucun doute que, dès le V^e siècle, des ouvrages fortifiés ont été construits avec l'assentiment des Spartiates.

Le territoire lacédémonien est, au V^e siècle, le résultat de la politique d'expansion de Sparte, faite d'annexions territoriales successives, qui a assuré à celle-ci la domination de toute la partie méridionale du Péloponnèse. Cela représentait une surface à contrôler exceptionnellement étendue pour une cité grecque,⁵ environ 8500 km². Cet immense territoire était divisé et réparti entre les deux catégories de population qui formaient l'ensemble lacédémonien : les Spartiates et les périèques. Les Spartiates ou Égaux, seuls citoyens de plein droit, se sont réservés la plaine de l'Eurotas en Laconie et les plaines de Stényklaros et de la Makaria en Messénie. Les terres périphériques et frontalières avec les régions du nord, l'Élide, l'Arcadie et l'Argolide, furent données aux périèques. Le statut de ces derniers est toujours débattu ; pour notre propos je me bornerai à rappeler que les périèques étaient des hommes libres intégrés au corps social des Lacédémoniens mais n'avaient pas le même statut que les Spartiates.⁶

Les enceintes lacédémoniennes dans la littérature

À partir de la deuxième moitié du V^e siècle, on voit apparaître, dans la littérature grecque, l'existence de fortifications dans la *périokis*. Le philolaconiste Xénophon est assez clair lorsqu'il évoque la progression de l'armée thébaine vers Gytheion en 370 av. J.-C. : « les villes qui ne possédaient pas de remparts (ἀτειχίστους) furent brûlées » (Xen. *Hell.* 6.5.32). Ceci signifie donc qu'un certain nombre de villes périèques possédait, en revanche, des remparts et étaient donc vraisemblablement protégées par une enceinte. Nous avons recensé, dans les sources littéraires, la mention plus ou moins explicite de trois enceintes urbaines (Fig. 1) construites par les Lacédémoniens ainsi que d'une forteresse inachevée.⁷

La première de ces enceintes protégeait la ville de Méthônè, sur la côte ouest de la Messénie. Au début de la guerre du Péloponnèse, en 431, les Athéniens, dirigés par un certain Carcinus, ravagèrent les côtes lacédémoniennes et, « au cours d'un débarquement à Méthônè, en Laconie, ils s'attaquèrent au rempart (ἀποβάντες τῷ τείχει προσέβαλον) » d'après Thucydide (2.25.1). L'emploi de *τείχος* dans le récit de Thucydide désigne clairement un ouvrage défensif qui défendait Méthônè. Plus vague, Diodore de Sicile (12.43), indique que les Athéniens « s'attaquèrent à la ville (τῇ πόλει προσβολὰς ἐποιεῖτο) » et « en firent le siège (πολιορκία). » Même si Diodore de Sicile n'est pas aussi précis que Thucydide, la mention du siège de la ville suffit pour en déduire que la ville était protégée par des remparts.

La deuxième enceinte et la forteresse inachevée étaient en Thyrratie, une région frontalière entre l'Argolide et Lacédémone. En 424, après la prise de l'île de Cythère, les Athéniens prirent la direction de la côte orientale de la Laconie pour la ravager et débarquèrent en Thyrratie où les Spartiates avaient installé les Éginètes en 431. À l'approche des Athéniens, les Éginètes « abandonnèrent

³ Ollier 1933 ; Ollier 1943.

⁴ Wace 1906 ; Wace 1907, 5–6 ; Kourinou 2000, 35–66 ; Ruzé & Christien 2007, 328–31.

⁵ Notons, par comparaison, que le territoire athénien, également exceptionnellement vaste, avait une superficie de 2650 km² et que celui d'une importante cité comme Corinthe ne faisait pas plus de 880 km².

⁶ Sur le statut des périèques, voir Ducat 2008 ; Hall 2000 ; Shipley 1997, 201–13 ; Mortens 2002.

⁷ Je mentionne seulement les enceintes qui ont été construites par les Lacédémoniens. Toutefois, les Athéniens ont construit plusieurs ouvrages fortifiés sur le territoire lacédémonien : à Coryphasion/Pylos en 425 (Thuc. 4.4 ; Diod. 12.61.1), le site est naturellement bien défendu et seules les parties les plus accessibles ont été renforcées par des courtines en pierres sèches et mortier, en six jours selon Thucydide, ou vingt jours d'après Diodore ; sur l'île de Cythère en 424 (Thuc. 4.54.4), la ville haute éponyme est pourvue d'une enceinte ; de même, il faut noter la construction en 413 (Thuc. 7.26.2) d'un mur barrant une bande de terre en forme d'isthme en Laconie, face à l'île de Cythère, probablement à l'emplacement de l'actuelle Elafonisos.

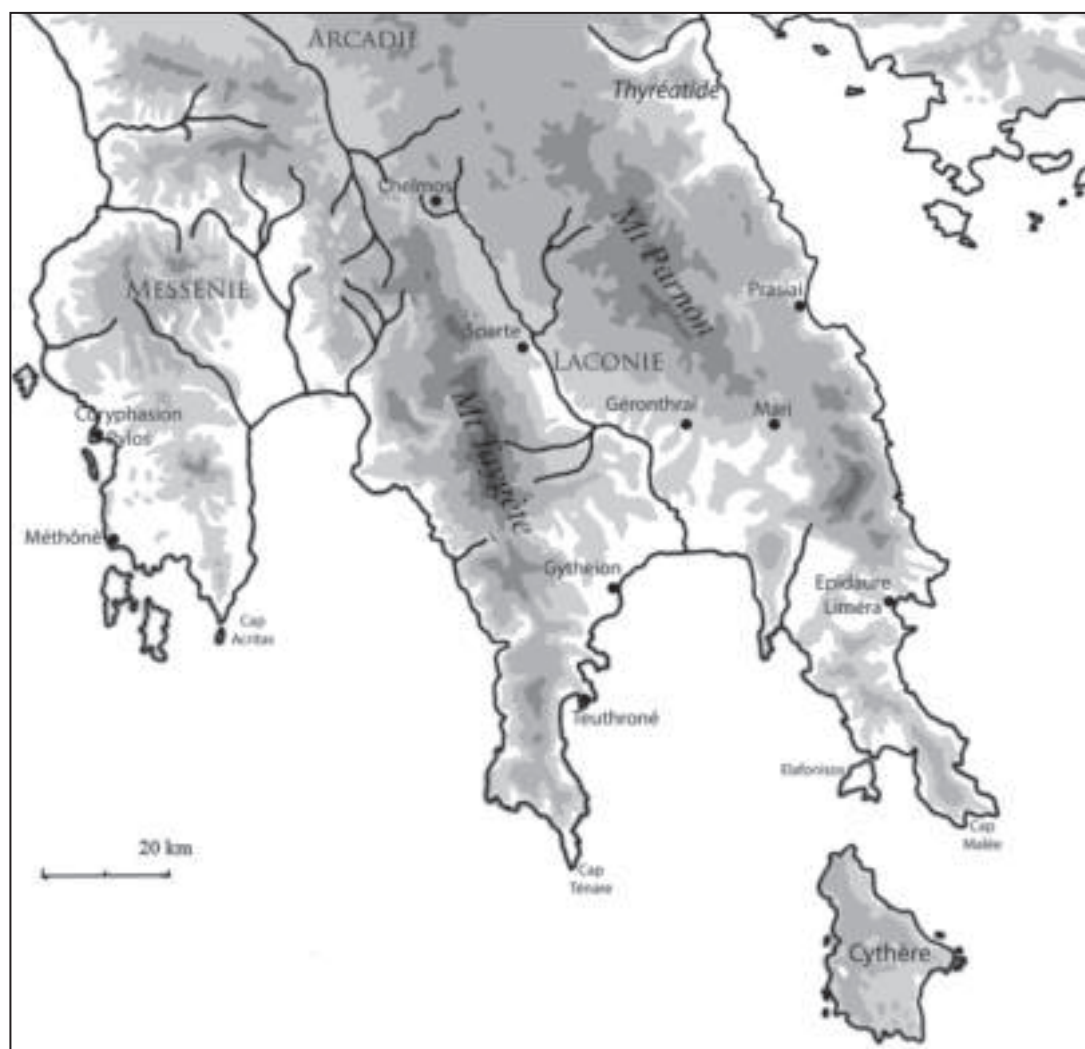


Fig. 1. Carte de la Messénie et de la Laconie (M. Guintrand).

la fortification qu'ils étaient en train de construire (ἐπὶ τῇ θαλάσῃ ὃ ἔτυχον οἰκοδομοῦντες τεῖχος ἐκλείπουσιν) et se retirèrent dans la ville haute qu'ils habitaient. » La troupe lacédémonienne qui aidait les Éginètes pour cette construction « refusa d'entrer dans la fortification (τὸ τεῖχος) », sous-entendu de la ville haute de Thyréa où vivaient les Éginètes, car ils craignaient de se faire enfermer, si l'on en croit Thucydide (4.57.1–2). Ce dernier emploie τεῖχος à deux reprises dans ce récit pour désigner deux constructions différentes : la fortification située en bord de mer qui est abandonnée avant d'être achevée, et celle qui entoure la ville haute de Thyréa.

La troisième enceinte connue entourait Gytheion, la ville périèque où se trouvaient le port principal de Sparte et les arsenaux. Xénophon (*Hell.* 6.5.32), décrivant

l'invasion de la Laconie par les Thébains et leurs alliés, indique que Gytheion a subi « un siège de trois jours (προσέβαλλον τρεῖς ἡμέρας) ». Il n'emploie pas le mot renvoyant spécifiquement à un ouvrage militaire, mais, par la mention même d'un siège de la ville, il fait part indirectement de l'existence d'une enceinte.

Ces quatre ouvrages défensifs montrent donc que les Spartiates ont permis à certains membres de la population périèque de fortifier leur ville ou un lieu proche aisément défendable. À l'échelle de l'ensemble du territoire sous contrôle spartiate, cela paraît peu. Comme Xénophon (*Hell.* 6.5.32) l'indique, certaines villes périèques étaient dépourvues de protection tandis que d'autres étaient protégées par une enceinte. Ainsi, Prasai, sur la côte est, n'a pas d'ouvrage défensif lors

de l'attaque athénienne de 430 (Thuc. 2.56.6),⁸ de même que Oion en Skiritide en 370 (Xen. *Hell.* 6.5.26). L'île de Cythère qui avait pourtant une grande importance stratégique, puisqu'elle surveillait les côtes du golfe de Laconie et protégeait celles-ci de la piraterie, n'était pas fortifiée lorsqu'elle fut prise par les Athéniens en 424 (Thuc. 4.54). En outre, il est notable que ces quatre ouvrages défensifs connus dans les sources littéraires ont en commun d'être proches de la mer. Toutefois, la nature des opérations militaires menées sur le territoire lacédémonien peut expliquer cela. Hormis l'invasion thébaine de 370, toutes les attaques ont été conduites depuis la mer et ont eu pour objectif de ravager les côtes. Nous avons donc logiquement un meilleur éclairage sur cette partie du territoire lacédémonien, mais nous ne pouvons pas non plus exclure la possibilité que des villes périèques de l'intérieur des terres se soient fortifiées. En revanche, les exemples de Cythère et de Prasiai excluent l'hypothèse selon laquelle toutes les villes périèques maritimes aient été fortifiées. En somme, il apparaît que les villes périèques ont été fortifiées au cas par cas et pas seulement parce qu'elles étaient à proximité de la mer.

Il convient maintenant d'essayer de préciser la période au cours de laquelle ces enceintes ont été érigées. Les récits des deux attaques subies par les villes de Méthônè et de Gytheion sont particulièrement intéressants pour essayer d'éclaircir cette question. La première de ces deux attaques fut conduite en 456/55 par Tolmidès, stratège athénien, qui avait convaincu ses concitoyens de mener une expédition navale contre la Laconie pour y faire des ravages.⁹ Thucydide (1.108.5) ne s'étend pas sur cette opération militaire et indique seulement qu'à Gytheion, les Athéniens ont incendié les arsenaux. D'après Diodore (11.84.6) qui nous rapporte un récit plus détaillé, Tolmidès « débarqua à Méthônè en Laconie, s'empara de la place (τὸ χωρίον) », apparemment sans grande difficulté. Puis, alors que les Lacédémoniens se portaient au secours de Méthônè, il reprit la mer en direction de Gytheion. Tolmidès « se rendit maître aussi de cette ville, incendia les arsenaux des Lacédémoniens et ravagea le pays » (Diod. 11.84.6). Diodore, ne mentionne pas de siège pour prendre l'une ou l'autre ville. Le mot τὸ χωρίον pour désigner la ville de Méthônè n'est pas très précis car il désigne simplement un espace, un lieu qui peut être habité, ou une place forte qui n'est pas nécessairement

fortifiée.¹⁰ Quant à Pausanias (1.27.5), il ne parle pas de la prise de Méthônè, et pour Gytheion il indique seulement l'incendie des arsenaux, mais ajoute la prise de l'île de Cythère et de Boiai, une autre ville périèque située sur le golfe de Laconie, au nord de Cythère. Le plus frappant, dans ces récits, est surtout que les Spartiates n'ont eu le temps de porter secours ni à Méthônè ni à Gytheion avant que ces villes soient prises et incendiées, ce qui montre la rapidité avec laquelle les Athéniens ont agi. Même si les données sont minces, les récits de cette attaque, qui montrent avec quelle rapidité ces villes ont été conquises, laissent supposer que celles-ci n'étaient pas encore protégées par une enceinte à l'époque de l'expédition de Tolmidès.

Les récits de la seconde attaque contre Gytheion et Méthônè témoignent cette fois de ce que chacune des deux villes est désormais protégée par une enceinte. Nous avons déjà évoqué ces enceintes. Rappelons seulement que la seconde attaque contre Méthônè se déroula en 431, au cours de laquelle comme nous l'avons vu, les Athéniens ont établi un siège devant les remparts de la ville, qui fut sauvée grâce à l'intervention d'un corps d'armée dirigé par le jeune Brasidas (Thuc. 2.25.1-2 ; Diod. 12.43). Quant à Gytheion, la seconde attaque est intervenue en 370 lors de l'invasion de l'armée thébaine qui fit le siège de la ville pendant trois jours. Nous déduisons de ces opérations militaires que la date de construction de ces deux enceintes est postérieure à 456 et l'on peut préciser que l'enceinte de Méthônè est antérieure à 431 et celle de Gytheion antérieure à 370. Nous pouvons toutefois présumer que Gytheion, comme Méthônè, s'était dotée d'une enceinte avant le début de la guerre du Péloponnèse, puisque son port et ses arsenaux lui conféraient une importance stratégique indéniable.

Malheureusement, les sources littéraires ne décrivent pas ces enceintes, mais nous pouvons nous faire une idée de l'efficacité de celles-ci. À propos de l'enceinte de Méthônè nous disposons de l'appréciation de Thucydide, à défaut de mieux. Elle était, selon ses mots, « faible et sans défenseur (ἀσθενεῖ καὶ ἀνθρώπων οὐκ ἐνόντων) » (Thuc. 2.25.1). La ville doit son salut aux Spartiates dirigés par Brasidas qui se trouvaient dans la région, mais pour Thucydide, sans l'intervention de ceux-ci la ville aurait été rapidement prise. Les Athéniens,

⁸ D'après Thucydide (6.105.2 ; 7.26) Prasiai a également été la cible de deux autres opérations militaires en 414 et 413 de la part des Athéniens et, dans *La paix* (v. 242-3), Aristophane dit de la ville qu'elle a été « trois fois, cinq fois, mille fois malheureuse, la voilà perdue ! ».

⁹ Les ravages commis en Laconie, puis en Béotie notamment, où Tolmidès perdit la vie, ont permis de rapporter un gros butin à Athènes et ont assuré la gloire du stratège. Celui-ci fut en effet honoré, en compagnie de son devin, d'une statue érigée sur un piédestal à côté du temple d'Athéna poliadé sur l'Acropole (Paus. 1.27.5).

¹⁰ Chantraine 1984², 1280 ; Pimouguet 2000, 111-3.

dont l'objectif était de faire des ravages, n'ont pas insisté, peut-être par crainte de l'arrivée des renforts lacédémoniens. À l'instar de Méthônè, nous pouvons présumer de la faiblesse des deux autres enceintes du fait de la rapidité avec laquelle les villes qu'elles protégeaient ont été prises. Ainsi, à Thyréa, Thucydide ne donne pas d'informations précises sur la durée du siège, mais son récit des opérations laisse entendre que les Athéniens n'ont pas rencontré de grandes difficultés. Il nous dit seulement que les Athéniens ont débarqué, attaqué la ville et l'ont prise avant de la raser. En outre, le fait que les habitants de Thyréa aient entrepris la construction d'une forteresse sur la côte, en prévision d'une attaque athénienne, montre aussi que leur enceinte leur apparaissait insuffisante (Thuc. 4.57.2-3 ; Diod. 12.65). Quant à l'enceinte de Gytheion, elle aurait vraisemblablement mieux résisté que les autres, puisque le siège de l'armée thébaine a duré trois jours si l'on en croit Xénophon (*Hell.* 6.5.32).

Les sources archéologiques

Les données archéologiques dont nous disposons aujourd'hui sur les enceintes que nous venons d'évoquer sont inexistantes, ou insuffisantes, pour être confrontées aux sources littéraires. Que ce soit pour Méthônè¹¹ ou Gytheion,¹² l'enceinte classique n'a pas encore été mise au jour. Quant aux deux enceintes mentionnées en Thyréatide, leur localisation reste incertaine en raison des maigres informations exploitables.¹³

Trois sites archéologiques pourraient correspondre à la Thyréa de Thucydide (Fig. 2) sans que l'un d'eux ne soit pleinement satisfaisant : Kastraki kato Méligou, Moni Loukou et Helléniko. Aucune trace d'enceinte n'a

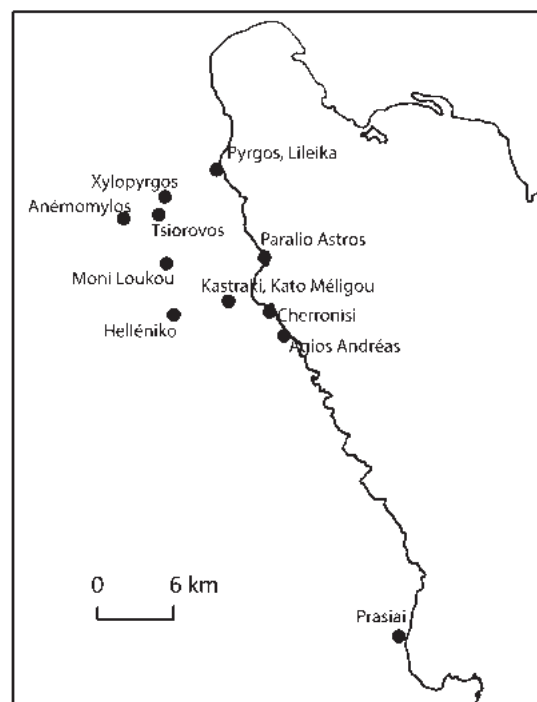


Fig. 2 Carte de la Thyréatide (M. Guintrand).

été découverte à ce jour sur les sites de Kastraki kato Méligou¹⁴ et de Moni Loukou.¹⁵ En revanche, sur la colline d'Helléniko se trouve une agglomération importante protégée par une enceinte, bien conservée, de 990 m de long.¹⁶ Cependant, les sites de Moni Loukou et celui d'Helléniko se trouvent à une dizaine de kilomètres de la côte, ce qui ne correspond pas à l'indication de Thucydide, qui place Thyréa à environ 2 km de la côte. Par ailleurs, trois petits promontoires sur la côte de la Thyréatide (Fig. 2) doivent également être pris en compte comme candidats dans le cadre de la localisation de l'emplacement de la forteresse inachevée des Éginètes :

¹¹ Au XIII^e siècle ap. J.-C., les Vénitiens ont occupé le site de Méthônè et construit une importante forteresse sur les vestiges de la ville antique, dont l'enceinte a été soit reconstruite, soit englobée dans le nouveau système défensif, voir Valmin 1930, 152-4.

¹² Dans la propriété de Vasilouni-Stathakou, une portion de courtine de l'enceinte de la ville a été découverte en 2010 par la 5^e Éphorie des antiquités préhistorique et classique. Elle a été datée de l'époque hellénistique, sans plus de précision, sur la base de la seule observation du type d'appareil, voir Spyropoulos *et al.* 2012, 97.

¹³ Ces informations consistent en la description de la Thyréatide par Pausanias (2.38.4-7), en l'indication de Thucydide qui place Thyréa à dix stades (1,8 km) de la côte, la description du Pseudo-Skylax des côtes de la Laconie (*Peripl.* 46) ainsi qu'en une inscription (SEG XXX, 377) trouvée près du site d'Helléniko qui mentionne les habitants d'Eua.

¹⁴ Le site se trouve sur une colline peu élevée et il se trouve à la bonne distance de la mer (dix stades), si l'indication de Thucydide est correcte. Mais l'absence de vestiges antiques à cet endroit ne permet pas d'affirmer qu'il s'agit de l'emplacement d'une ville, voir Pritchett 1989, 95 ; Phaklaris 1990, 104-5 et Goester 1993, 93-5.

¹⁵ Le lieu, au sud de Kato Doliana, n'est pas facile à défendre et les vestiges qui ont été mis au jour datent surtout de l'époque romaine, voir Shipley 1996, 277 ; Christien 1989b, 78.

¹⁶ Goester 1993, 55-81 a effectué une description détaillée du site, et particulièrement de l'enceinte, qu'elle propose de dater de la deuxième moitié du IV^e siècle, lorsque la Thyréatide était dominée par Argos ; Phaklaris 1990, 78-90 propose une date assez similaire entre le IV^e et le III^e siècle.

Cherronisi Nisi, Paralio Astros et Nisi Agios Andréas. Aucune fortification n'a été découverte sur le site de Cherronisi.¹⁷ Les sites de Nisi Agios Andréas et Paralio Astros sont des candidats plus convaincants. Ils sont, l'un et l'autre, implantés au sommet d'une colline naturellement bien défendue et possèdent tous les deux une enceinte bien conservée. Certains chercheurs pensent que ces deux enceintes, celle de Paralio Astros¹⁸ comme celle d'Agios Andréas, pourraient dater du V^e siècle, la deuxième ayant subi une modification à la période médiévale.¹⁹

Cependant, en l'absence de données archéologiques fiables, issues de fouilles stratigraphiques seules susceptibles de fournir une chronologie absolue, ces propositions de datation des enceintes d'Helléniko, Paralio Astros et Agios Andréas demeurent de simples hypothèses, fondées sur le type d'appareil des parements des courtines conservées ainsi que sur des données historiques transmises par les sources littéraires. Or, cette méthode de datation est évidemment sujette à caution.²⁰ Par ailleurs, la Thyréatide a été disputée à Sparte par Argos dès l'invasion de la Laconie en 370, et il convient donc de définir laquelle de ces deux cités est à l'origine des ouvrages défensifs qui y ont été construits. La récente découverte des archives de la ville d'Argos a en effet permis de montrer que les Argiens ont profité de l'affaiblissement de Sparte, en 370, pour récupérer la Thyréatide,²¹ avant peut-être de perdre à nouveau cette région avant 338, date à laquelle Philippe II de Macédoine a réglé le conflit territorial entre Sparte et Argos en attribuant la Thyréatide aux Argiens. Par ailleurs, il existe d'autres ouvrages fortifiés en Laconie

(enceintes urbaines, acropole fortifiée et tours) que l'on a proposé de dater de l'époque classique. Cependant, là encore, ces datations reposent sur le type d'appareil de ces monuments et sont tout aussi discutables.²² L'étude de ces vestiges requiert un examen approfondi, qui n'a jamais été fait, afin de proposer des hypothèses de datation fiables ; nous n'avons pu l'effectuer nous-mêmes, c'est pourquoi nous n'avons donc pas tenu compte de ces enceintes dans cette contribution.²³

Il convient de remarquer qu'il est également possible que certaines fortifications d'une période antérieure aient été réutilisées à l'époque classique,²⁴ comme l'enceinte de l'acropole de Géronthrai.²⁵ Plusieurs phases de construction, d'abandon et de reconstruction de cette enceinte ont ainsi pu être mises en évidence. Il semble donc que l'acropole ait été fortifiée dès l'Helladique Ancien II avant d'être abandonnée à la fin de cette période. Celle-ci a ensuite été réoccupée (et sa fortification restaurée) au cours de l'Helladique Moyen avant d'être à nouveau abandonnée. L'occupation du site a repris à la période géométrique, mais ce n'est qu'à la fin de la période classique, après 370, que l'enceinte a été reconstruite et que l'acropole redevient un lieu d'habitation et de refuge. Enfin, à l'époque hellénistique, l'enceinte est à nouveau reconstruite : il s'agit d'un simple mur de pierres sèches, sans tour, érigé afin d'englober les précédents murs dans le nouveau système défensif.

Le travail de la mission hollandaise montre que les habitants de Géronthrai n'ont pas ressenti la nécessité de reconstruire leur enceinte au moment de la guerre du Péloponnèse, ce qui n'exclut pas la possibilité que ceux-ci

¹⁷ Il est situé au centre de la baie, sur une colline peu élevée (28 m) et peu propice à l'installation d'une forteresse, où une prospection de surface a montré que le site avait été occupé de l'Helladique Ancien jusqu'à la période hellénistique, voir Goester 1993, 88 et 98 ; Phaklaris 1990, 40–6.

¹⁸ Phaklaris 1990, 56–78 ; Shipley 1996, 277.

¹⁹ Phaklaris 1990, 47–55 ; Shipley 1996, 279.

²⁰ Leriche 1994.

²¹ Charalambos 2006, 429–30.

²² À notre connaissance, trois tours isolées en Thyréatide ont été datées par Phaklaris 1990, 201–5 vers 450–400, uniquement d'après leur type d'appareil sur la base des travaux de R.L. Scranton dont on sait aujourd'hui qu'ils sont dépassés. Il s'agit de deux tours circulaires à Xylopyrgos et à Anemomylos, Prosilia, ainsi que d'une tour quadrangulaire à Pyrgos Lileika. Cinq autres enceintes ont également été datées d'après le type d'appareil : Tsiorovos en Thyréatide, datée de la fin V^e ou du début IV^e siècle par Phaklaris 1990, 90–104 ; Chelmos, en Belminatis, comporterait deux phases dont l'une serait médiévale et l'autre classique, selon Shipley 1996, 283 ; Mari, Kastelli, sur les pentes ouest du Parnon, a été datée entre la fin de l'époque archaïque et le début de l'époque classique par Shipley 1996, 287 ; le fort de Teuthroné, au sud-est de Kotronas, a été daté, sans autre précision, du début du IV^e siècle par L. et T. Moschou 1981 ; enfin, Epidauros Liméra, sur la côte est de la Laconie, a été datée d'une période se situant entre la fin du V^e et le début du IV^e siècle par Lawrence 1979, 147. Voir aussi Shipley 1996, qui a établi une liste de tous les sites archéologiques connus de Laconie.

²³ Nous entendons mener cette étude dans notre thèse de doctorat dont le travail est en cours.

²⁴ Thucydide (4.31.2) évoque un ancien fortin sur une acropole de l'île de Sphactérie que les Lacédémoniens envisageaient d'utiliser ; de plus, sur de nombreux sites, le ramassage de surface montre une forte occupation à l'Âge du Bronze ; aussi, l'existence d'acropoles fortifiées datant de cette époque, à l'instar de Géronthrai, n'est pas à exclure, voir Shipley 1996.

²⁵ L'enceinte de Géronthrai est fouillée depuis 1995 par une mission de l'université d'Amsterdam dirigée par Joost Crouwel et Mieke Prent. Pour la présentation des fouilles, voir MacVeagh Thorne & Prent 2009, 235–42.

se soient servis de l'ancienne enceinte en cas d'urgence. Ceci peut s'expliquer par la position géographique du site, qui se trouve à l'intérieur des terres et donc à l'abri des opérations de *razzia* auxquelles les périèques de la côte devaient faire face. La reconstruction de la fin de la période classique semble donc plutôt devoir être mise en relation avec l'invasion thébaine, qui avait relancé les conflits territoriaux avec Argos ; la cité argienne en profita alors pour reconquérir la façade est de la Laconie. Géronthrai, située au débouché d'une route traversant le Parnon, se trouvait donc dans une zone de tensions.

Périèques, Spartiates et fortifications

Il convient maintenant de nous interroger sur la raison d'être de ces ouvrages fortifiés. Nous allons présenter dans cet exposé quelques pistes de réflexion. Dans le débat toujours ouvert sur le statut des périèques lacédémoniens, ces enceintes permettent à certains chercheurs de justifier que les villes périèques jouissaient d'une forme d'autonomie.²⁶ Il s'agit là d'une notion communément reprise par les historiens, depuis les travaux d'Y. Garlan,²⁷ partant du principe que l'enceinte protégeant l'espace urbain d'une cité est la marque physique, en quelque sorte, de l'autonomie de celle-ci. Mais quelle est la place de ces enceintes dans le système défensif lacédémonien ? Font-elles partie d'un réseau hiérarchisé ayant pour objectif de contrôler le territoire ou sont-elles isolées ?

Voyons d'abord les acteurs de ce système défensif. On a parfois attribué aux périèques le rôle de premiers défenseurs de Lacédémone à cause de la position géographique de ceux-ci, mais aussi en raison des fonctions militaires qu'ils assumaient au sein de l'armée lacédémonienne.²⁸ Les périèques avaient, en effet, le devoir de contribuer à l'effort de guerre lorsque l'assemblée de Sparte le leur demandait. Ainsi, à l'époque classique, les périèques ont pris part à la majorité des batailles dans lesquelles Sparte a dû s'engager, et la proportion de périèques au sein de l'armée n'a cessé d'augmenter.²⁹

Ainsi, on en déduit souvent que les enceintes des villes périèques avaient pour fonction de surveiller et

contrôler les voies d'accès à Sparte. Par ce procédé, certains historiens vont même jusqu'à parler de lignes de défense fortifiées sur les routes qui mènent à la Laconie.³⁰ Mais si tel avait été le cas, cela signifierait que ces enceintes faisaient partie d'un ensemble défensif hiérarchisé, organisé autour de Sparte et dirigé par celle-ci. La cité lacédémonienne aurait donc donné un rôle actif à des ouvrages fortifiés dans la défense de son territoire. Toutefois, il nous semble que la présence d'une route à proximité d'une ville protégée par une enceinte ne suffit pas à en faire l'organe d'un réseau défensif contrôlant les voies de communication. Pour pouvoir accéder à un site occupé, de quelque type qu'il soit, il faut bien nécessairement une voie d'accès, et il semble parfaitement normal que ces sites soient reliés entre eux par des routes, dont les principales vont dans la direction de Sparte.

Une des solutions pour tenter de comprendre la fonction de ces fortifications de villes périèques réside dans l'examen des invasions que le territoire lacédémonien a subies, afin d'observer la réaction des agressés : les Spartiates et les périèques. Si l'on suppose, comme cela a été fait, que les périèques avaient le rôle de premiers défenseurs de Lacédémone, cela implique qu'en cas d'agression, les périèques auraient dû être les premiers à combattre pour assurer la défense. Or, nous avons inventorié neuf récits d'agression dans la littérature du V^e siècle à l'année 370. Deux de ces agressions, survenues en 414 (Thuc. 6.105.2) et 413 (Thuc. 7.26), n'ont donné lieu qu'à de courtes incursions afin de faire quelques ravages dans la *périokis* sans que les Lacédémoniens n'interviennent. Lors de six agressions, les villes périèques ont été la cible d'attaques. Seul le siège athénien de Méthônè en 431 (Thuc. 2.25.1-2 ; Diod. 12.43) a été un échec. Les villes ont été prises dans les cinq autres cas : Méthônè, Gytheion, Boia et Cythère en 455 (Thuc. 1.108.5 ; Diod. 11.84.6 ; Paus. 1.27.5), Prasiai en 430 (Thuc. 2.56.6 ; Diod. 12.42.7), Cythère et Thyra en 424 (Thuc. 4.53-57 ; Diod. 12.65.8-9), Cythère en 393 (Xen. 4.8.7-8) et enfin Oion et Gytheion en 370 (Xen. 6.5.25-32 ; Diod. 15.64-67). Les récits de ces six agressions nous montrent que seuls les périèques habitants la ville de Cythère sont sortis pour livrer une courte bataille avant de se réfugier dans la ville haute. Cela dit, à Cythère se trouvait une garnison lacédémonienne permanente destinée à protéger l'île, et il est probable que les habitants de Cythère n'aient

²⁶ Lévy 2003, 150 ; Shipley 1997, 211-2.

²⁷ Garlan 1974.

²⁸ Cartledge 2001, 15 ; Delavaud-Roux, Gontier & Liesenfelt 2000, 525-6.

²⁹ Ducat 1999, 41-2 ; Lazenby 1985, 14-7.

³⁰ Christien 2006, 164-71 ; Lonis 2010², 100.

fait que suivre les ordres de cette garnison. Dans tous les autres cas, les périèques n'ont opposé de résistance qu'en protégeant leur propre ville. Nous n'avons pas d'exemple d'initiative individuelle de la part d'une ville périèque en vue de porter secours à une autre ville périèque. La seule initiative individuelle vient d'un Spartiate, Brasidas, qui décide de porter secours à Méthônè en 431. Il revient toujours à Sparte d'assurer la défense de l'ensemble du territoire lacédémonien et ce n'est que lorsque les Spartiates demandent spécialement aux périèques de se mobiliser et de rejoindre leur armée que ces derniers participent à l'effort défensif. L'affaire de Pylos, en 425 (Thuc. 4.2-8 ; Diod. 12.61-63), en est la parfaite illustration. Alors que les Athéniens ont abordé et commencé à fortifier le promontoire de Pylos/Coryphasion, les villes périèques qui se trouvent à proximité n'interviennent pas, et lorsque Sparte décide d'envoyer une armée pour déloger les Athéniens, elle demande aux périèques les plus proches de se joindre à l'armée. En somme, les périèques sont convoqués de la même manière pour participer à l'effort de guerre, que ce soit pour défendre le territoire lacédémonien ou pour mener une bataille en dehors du territoire. Il nous semble également que les villes périèques ne doivent pas non plus être perçues comme une première ligne de défense, mais plutôt comme un glacis protecteur, c'est-à-dire un espace-tampon qui permettait à Sparte de maintenir une certaine distance entre les terres spartiates proprement dites et les frontières de la Laconie.

La protection de la *périoikis* dépendait donc de Sparte et de sa réactivité. Les sources montrent l'existence d'une garnison permanente à Cythère pour protéger l'île.³¹ Il semble néanmoins que Cythère soit un cas particulier et il ne faut donc pas généraliser cette situation aux autres villes périèques. Dans la littérature, l'armée lacédémonienne est intervenue quatre fois après avoir été envoyée par Sparte : en 455 pour contrer les ravages de Tolmidès, en 425 pour déloger les Athéniens du fort qu'ils avaient construit à Pylos, en 424 à Thyra et en 370 à Oion et Leuctron pour bloquer l'avancée des troupes thébaines et de leurs alliés. Une fois, en 431, une troupe spartiate menée par Brasidas est intervenue spontanément pour sauver Méthônè, mais elle n'était pas en garnison dans cette ville. Selon Thucydide, Brasidas et sa troupe étaient dans la région, et une fois que

celle-ci fut informée de la situation, elle prit la décision d'intervenir. Il apparaît donc qu'en dehors de Cythère, la stratégie défensive lacédémonienne ne repose pas sur des garnisons enfermées dans des villes périèques ou d'autres lieux fortifiés, mais sur une armée qui se déplace sur le territoire pour en assurer la défense.

La stratégie de guerre menée par les Athéniens, consistant à faire des attaques rapides depuis la mer, mettait à mal ce système défensif. Comme le remarque Thucydide (4.55.1), les Lacédémoniens étaient face à une « menace que dressait de toutes parts contre eux une guerre aux coups rapides et impossibles à parer ». Le but des Athéniens n'était évidemment pas d'envahir la Laconie, mais d'éviter soigneusement l'armée lacédémonienne tout en provoquant des ravages afin de porter atteinte à l'équilibre social lacédémonien. Sparte craignait particulièrement les révoltes, même si celles-ci n'ont apparemment pas été très nombreuses. Les enceintes lacédémoniennes de la *périoikis* sont probablement une réponse à cette nouvelle forme de guerre consistant à porter atteinte rapidement au territoire, méconnue auparavant dans le Péloponnèse, esquissée par Tolmidès avant d'être systématisée pendant la guerre du Péloponnèse sous l'impulsion de Périclès (Thuc. 1.143.4).

D'après Diodore de Sicile, le territoire lacédémonien n'avait jamais subi de ravages auparavant. Cette pratique de la guerre était une nouveauté pour les Lacédémoniens. Grâce au réseau d'alliance développé au sein de la ligue du Péloponnèse dont elle était l'*hégémôn* depuis la fin du VI^e siècle, Sparte avait réussi à éloigner les risques de violation de son territoire. Les membres de cette ligue se devaient une assistance mutuelle et avaient pour devoir de suivre les Péloponnésiens partout où ceux-ci le souhaitaient,³² et, à l'exception d'Argos et de plusieurs cités de l'Achaïe, l'ensemble des cités du Péloponnèse faisait partie de cette ligue. Les alliés formaient ainsi une première ligne de défense, une protection avancée contre un agresseur.³³ Tant que la ligue du Péloponnèse a été effective, aucune invasion par voie de terre n'a été véritablement envisageable, puisque pour atteindre la Laconie, il fallait traverser les territoires des alliés de Sparte où l'on pouvait déjà organiser la défense.³⁴ Ce schéma défensif a été mis en pratique lors de la deuxième

³¹ A propos du problème des garnisons dans la *périoikis*, voir Ducat 2008, 55-8.

³² On retrouve cette expression chez Thucydide et Xénophon à plusieurs reprises, voir à ce propos Levy 2003, 219 note 7.

³³ Les alliés sont aussi intervenus dans des affaires intérieures de Lacédémone, comme lors de la révolte messénienne de 464 où ils ont aidé militairement les Spartiates à essayer de déloger les Messéniens révoltés retranchés sur le mont Ithôme (Diod. 11.64).

³⁴ C'est pour cela qu'une invasion de la Laconie par voie terrestre ne fut possible qu'après la défection des alliés péloponnésiens de Sparte, à la suite de la bataille de Leuctres en 371.

guerre médique, lorsque Sparte a souhaité mettre en défense le Péloponnèse en fixant le lieu de bataille contre l'armée perse à l'isthme de Corinthe. Pour cela, les Péloponnésiens ont entrepris la construction d'un mur barrant l'isthme derrière lequel l'armée grecque aurait combattu (Hdt. 8.49 ; 8.72).

La stratégie d'attaque par la mer des Athéniens mettait les Lacédémoniens dans une position comparable à une ville dont l'enceinte est trop grande pour être protégée efficacement. L'agression de Tolmidès, en 455, avait montré l'incapacité des Spartiates à protéger les périclées qui se trouvaient dans cette situation. Pendant la guerre du Péloponnèse les Spartiates ont organisé un corps de cavalerie et d'archers, puis ils ont envoyé des troupes dans toute la *périokis* pour accélérer la vitesse d'intervention de celui-ci, mais aucune de ces troupes, à l'exception de celle qui opéra autour de Cotyrta et d'Aphroditia, n'est intervenue, car celles-ci s'estimaient inférieures en nombre (Thuc. 4.55–56). C'est sans doute la menace que faisait peser la marine athénienne sur la *périokis* qui a amené certaines villes périclées à se doter d'une enceinte urbaine afin de protéger leurs habitants et leurs biens, sans pour autant que la stratégie défensive spartiate ne soit modifiée. Nous pensons donc que l'initiative de ces fortifications vient des périclées.

Ces fortifications construites par les Lacédémoniens dans la *périokis* montrent toute l'ambiguïté des relations que les Spartiates entretenaient avec ces ouvrages techniques de défense. Au-delà du seul cadre idéologique, on remarque une véritable méfiance envers les fortifications.³⁵ Derrière les discours moqueurs sur les hommes qui combattent à l'abri de murailles, on devine la crainte des Spartiates de se retrouver enfermés dans une enceinte qui aurait gêné leur pratique éprouvée de la guerre terrestre et leur aurait retiré la possibilité de se replier. Se réfugier dans une enceinte apparaît ainsi pour les Spartiates comme le dernier recours lorsque les autres possibilités ont été épuisées. Lors de l'attaque athénienne contre Thyra en 424, la garnison lacédémonienne refusa d'entrer dans l'enceinte de la ville malgré la demande des Éginètes qui habitaient le lieu, et elle se retira sur les hauteurs, d'où elle observa, sans réagir, la prise de la ville et la capture de ses habitants (Thuc. 4.57.2). Les Spartiates préféraient tirer le meilleur parti du terrain, en amenant leurs adversaires en un lieu à leur avantage, afin de provoquer un combat hoplitique (Isoc. Arch. 74–76). Par ailleurs, aux

yeux des Spartiates, toute enceinte courait le risque de tomber entre les mains de l'ennemi et donc que celui-ci l'utilise pour prendre pied dans un territoire, de la même manière que les Perses avaient pris possession de Thèbes lors de la deuxième guerre médique pour s'en servir de base d'opération (Thuc. 1.90.2).

Cependant, en y regardant de plus près, les Spartiates n'ont pas hésité, à plusieurs reprises, à construire des ouvrages fortifiés, que ce soit sur leur propre territoire ou sur celui de leurs alliés (Tableau 1). Les Spartiates n'étaient donc pas absolument réfractaires à l'idée de construire des fortifications si cela s'avérait nécessaire. Néanmoins, il est important de noter que, à l'exception de Décélie³⁶ et de la position qu'Agésipolis envisageait de fortifier, la plupart de ces ouvrages fortifiés n'étaient pas érigés à la demande des Spartiates pour leur usage propre, mais pour celui de leurs alliés. De plus, les

Tableau 1. Opérations de fortification lacédémoniennes

Date	Sources littéraires	Lieu	Opérations
480	Hdt. 8. 72–74	Isthme (Corinthe)	Les Lacédémoniens contribuent à la construction du mur qui doit barrer l'isthme de Corinthe, afin de combattre les Perses.
424	Thuc. 4.57.1–2	Thyréatide	Une garnison lacédémonienne aide les Éginètes à construire une forteresse en bord de mer.
413	Thuc. 7.19	Décélie (Attique)	Les Lacédémoniens et leurs alliés péloponnésiens fortifient Décélie en Attique.
393	Xen. Hell. 4.4.13	Epieikeia (Corinthe)	Construction d'une fortification afin que les alliés des Lacédémoniens disposent d'un poste avancé pour se défendre.
390	Xen. Hell. 4.7.7	Passe à l'entrée de l'Argolide	Volonté d'Agésipolis de fortifier un retranchement avant d'y renoncer en raison d'un sacrifice non favorable.
378	Xen. Hell. 5.4.41	Thespies (Béotie)	Agésilas fortifie la ville avant le retrait de l'armée lacédémonienne.
370	Xen. Hell. 6.5.12	Eutaia (Arcadie)	Agésilas fait réparer l'enceinte de la ville.

³⁵ Garlan 1974, 98–9.

³⁶ Même dans ce cas, la fortification n'est pas destinée seulement aux Lacédémoniens mais aussi aux alliés péloponnésiens de Lacédémone.

Spartiates construisaient ces ouvrages fortifiés avant de se retirer, c'est-à-dire afin d'aider leurs alliés à se défendre lorsqu'eux-mêmes ne seraient plus là pour les soutenir. Pour résumer, les Spartiates agissaient en fonction de la situation militaire du moment et ils n'hésitaient pas à construire des fortifications pour protéger leurs alliés.

Conclusion

L'organisation défensive du territoire lacédémonien a donc évolué au cours de la deuxième moitié du V^e siècle, probablement entre l'attaque de Tolmidès en 455 et le début de la guerre du Péloponnèse, afin de s'adapter à la stratégie qu'Athènes avait adoptée pour attaquer les Lacédémoniens sur leur propre territoire. On observe ainsi le développement d'un réseau d'ouvrages fortifiés sur les côtes du territoire lacédémonien. Il ne faut cependant pas voir dans cette évolution défensive un abandon des principes de la stratégie défensive lacédémonienne, car on a pu constater que celle-ci reste pleinement en vigueur. Pour Sparte, il convient toujours de se porter au devant de l'agresseur pour provoquer un combat hoplitique en rase campagne. L'armée lacédémonienne se gardait bien, au contraire, de combattre à l'intérieur d'une des enceintes érigées sur leur territoire. Les sources littéraires apportent des informations limitées, on l'a vu, sur celles-ci. Il semble que ces enceintes étaient relativement peu solides car leur fonction première n'était probablement pas de permettre à une ville périèque de pouvoir subir un long siège, mais de se protéger suffisamment longtemps pour que Sparte ait le temps de lui envoyer une armée de secours. Les Spartiates ne souhaitaient probablement pas voir sur leur territoire de puissantes enceintes qui, si elles tombaient aux mains d'un ennemi, auraient pu servir de base avancée comme l'avait été l'enceinte de Pylos construite par les Athéniens. Toutefois, nous pensons que le territoire lacédémonien comptait plus d'enceintes urbaines que la littérature grecque ne nous le laisse entrevoir. Seules les fouilles archéologiques à venir sur les sites des nombreuses villes périèques de Laconie et de Messénie ainsi que la datation absolue de leurs dispositifs défensifs pourraient permettre de proposer un tableau historique plus précis de la défense du territoire lacédémonien à l'époque classique.

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ISOLATED TOWERS IN THE FORTIFICATION NETWORK OF ANCIENT MOLOSSIA: A CASE STUDY*

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Abstract

Since the 4th century BC and through the Hellenistic period, the region of Molossia in ancient Epirus (roughly corresponding to the modern prefecture of Ioannina) developed a dense network of fortifications, ranging from fortified cities to much smaller forts and refuges for the inhabitants, who still dwelt in their traditional unfortified hamlets. What, however, seems to have been rare in this elaborate network and in contrast to what happened in southern Greece, are isolated watchtowers and outposts. Only a handful of these towers have been documented within the borders of Molossia.

The three case studies in this paper (Ambelochori, Tsouka and Kastri of Psina) have certain similarities concerning their construction and location. They all combine large, monumental corner stones and smaller ones put together in a polygonal or pseudo-isodomic way with kyphosis and peritonia at the corners. They are orthogonal in plan (c. 11 by 7 m) with one partition wall in the middle. Their exact dating is difficult to determine but most probably they were all erected in the first decades of the 3rd century BC under the reign of Pyrrhus, whose interest in building fortifications is known from ancient sources.

The isolated towers of Molossia do not seem to form a coherent part of any fortification or beacon network and their location cannot be related to any productive activity such as farming or mining. They seem to have been used as guard posts for passages and roads, monitoring the movement of people and probably their flocks too, but also operating as monumental symbols of state authority and power.

Introduction

Ancient Epirus is one of the most interesting, yet also most unexplored, areas of ancient Greece with regard to its defence network (Fig. 1). At least 100 fortifications of

various types (city walls, forts, blockage walls, towers) have been documented in the modern prefectures of Thesprotia, Ioannina and Arta, and similar numbers are also known from the neighbouring region of southern Albania. Although most of these have been located and

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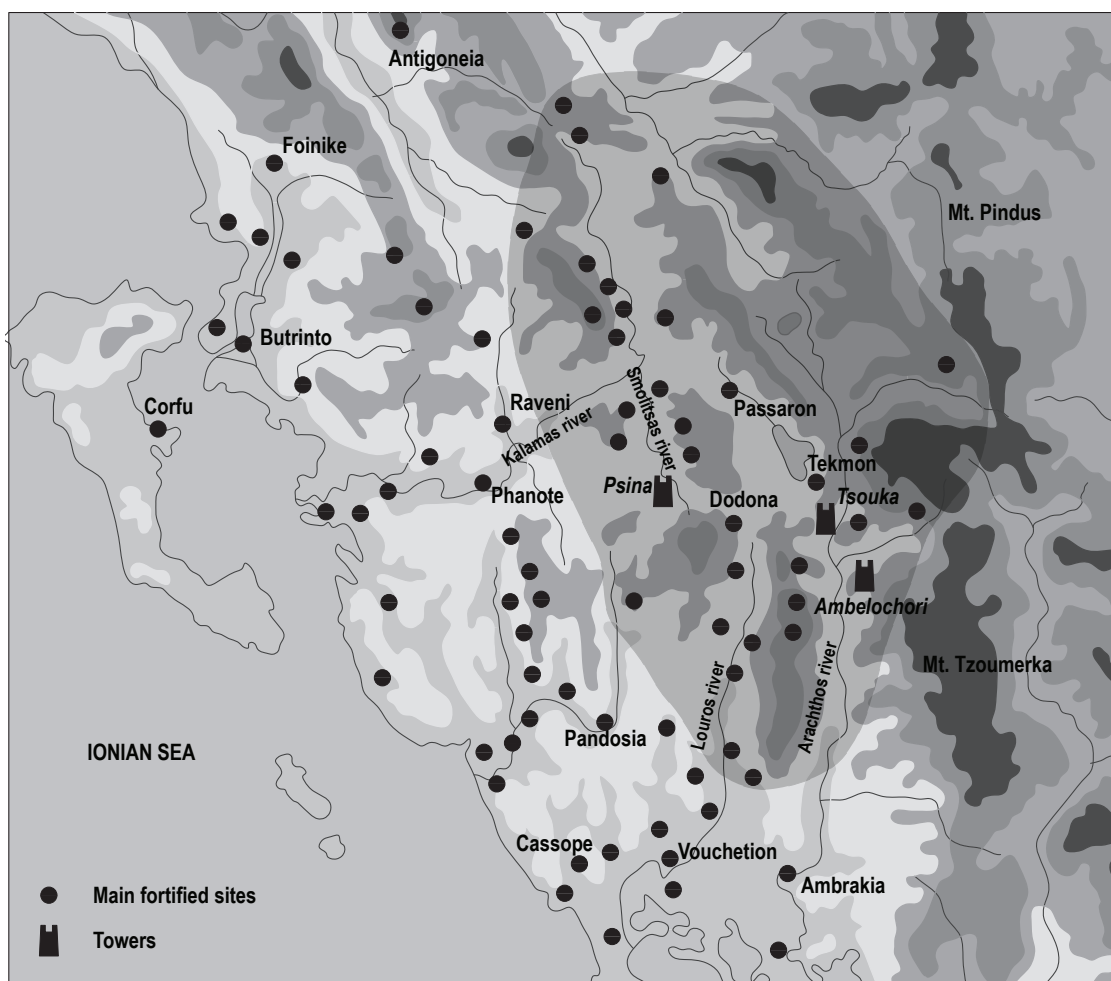


Fig. 1 Map of Epirus with the main fortified sites (the area of Molossia shaded; map by the author).

catalogued, especially by Hammond and Dakaris,¹ few comparative studies of their architecture, topography and history have been undertaken.²

The majority of the fortifications in Epirus are located within the area which can be defined as ancient Molossia, roughly corresponding to the modern prefecture of Ioannina (59 compared to 54 in southern Albania and 40 in Thesprotia).³ This region was the homeland of the large tribal federation of the Molossians, one of the Dorian tribes that lived in ancient Epirus. Emerging from the area of modern Pogoni, the Molossians gradually

extended their control towards the south, evolving into the most powerful and influential state of Epirus around the end of the 5th century BC and attracting more tribes to their federation.⁴ Like most of the other Epirotans, the Molossians inhabited a quite mountainous and rugged area, divided by steep mountain ridges, deep gorges and rivers,⁵ a land which offered few valleys for cultivation, but was ideal for pasture, hunting and lumbering. This form of terrain and economy favoured the traditional division of the local population into clans and tribes which were then incorporated into a greater tribal federation under a hereditary king from the family of

¹ Hammond 1967; Dakaris 1956; Vlahopoulou-Oikonomou 2003.

² Dausse 2002; Dausse 2003; Dausse 2008.

³ Vlahopoulou-Oikonomou 2003, 318–31.

⁴ Hammond 1967, 478–80; Meyer 2013, 114–18.

⁵ Hammond 1967, 159, 199; Dausse 2008, 161.

the Aeacidae, mythical descendants of Achilles.⁶ The population dwelt in small, unfortified settlements, even during Hellenistic times, although new cities were built according to the models of southern Greece.⁷ This social and political organization, although obsolete and semi-barbarous in the eyes of the southern Greeks, did not prevent the Molossians from developing into one of the strongest Hellenistic states (initially within the Molossian *koinon* and then the Epirotan *koinon*). It is during the emergence and consolidation of the Epirotan state that the fortification network of Molossia is believed to have been built.

The sites

The first site we will examine is located at the modern village of Ambelochori (formerly known as Skloupou) to the south-east of Ioannina (Fig. 1).⁸ The village lies on the slopes of a mountain ridge facing east and the ancient remains are to be found at Saint Paraskevi cemetery church, at the eastern-most edge of the settlement. These consist of various large blocks supporting most of the walls of the building which measures 5.9 m by 9 m (Figs 2–3). Their height is approximately 0.5 m and their width 0.6 m. Most have been reworked in recent years, losing any traces of peritenia and kyphosis, apart from the block standing at the church's north-east corner which preserves its peritenia band. Two similar blocks have been re-used at a nearby house and ancient roof tiles and sherds have been recorded scattered around the church. The actual size and form of the blocks, as well as the size of the church strongly indicates the presence of an ancient tower, something which is also supported by the old name of the village Skloupou which means 'tower' or 'pillar' in Slavic.⁹ It is unlikely that all these blocks were transported to there from another place since the re-use of ancient ashlar blocks was not common in local traditional architecture, where builders preferred to break large blocks into smaller ones. The position is ideal for the erection of a watchtower, since it offers a panorama of the Tzoumerka region to the south (home of the tribe of the ancient Athamanians who were not part of the Molossian league until 295 BC), at the same time allowing its garrison to control the passages next to the rivers Arachthos and Kallarytikos leading to the south.



Fig. 2 The church of Hagia Paraskevi at Ambelochori (photo: Ch. Kleitsas).

Approximately 280 m to the south of the monastery of Tsouka, near the village of Elliniko, our second case study can be found. On a very narrow rocky ridge, surrounded by steep cliffs and overlooking the deep gorge of the river Arachthos, the poor remains of a rectangular tower are preserved (Figs 4–6). The ruin was not noted by Hammond although it is easily approached from a rather wide old path leading from the monastery towards the south.¹⁰ The tower stands on the western end of the ridge, its long side covering the ridge's width almost entirely. Its best preserved part is its western wall which can be followed for a length of about 10 m (Figs 5–6). It consists of large, roughly worked limestone blocks as well as smaller ones



Fig. 3 The church of Hagia Paraskevi at Ambelochori. The north-east corner of the building (Pappas 2004, 176).

⁶ Hammond 1967, 480; Meyer 2013, 114.

⁷ Hammond 1967, 672–90; Dakaris 1987, 71; Pliakou 2008.

⁸ Pappas 2004.

⁹ Pappas 2004, 169.

¹⁰ Hammond 1967, 177.



Fig. 4 The site of the tower at Tsouka (author's photo).



Fig. 5a–b The west wall of the tower at Tsouka (author's photo).

built in a pseudo-isodomic system. The wall is founded on the worked surface of the ridge's limestone and is more than 1.5 m wide at its best preserved section. Possible pry-marks survive on the rock foundations. At the wall's highest point there is a large (unfortunately not *in situ*) rectangular block with a deep, slanting groove along one of its edges whose function is unknown. Not much survives from the other walls (the north and south most probably having disappeared into the gorge); a few small blocks remain from the tower's eastern wall, suggesting that the original tower was a rectangular structure measuring 11 m by 7 m, most probably divided by a wall in the middle (Fig. 11). Along the ridge various sherds of pottery and tiles have been located, but none can offer

any secure dating. Possible quarrying marks survive on the limestone rocks to the west of the tower.

The site offers a unique view of the Arachthos gorge and of the high plateaus to the east. The view to the west is blocked by a high cliff, offering no visual contact with the valley of Ioannina and the major ancient cities there (Tekmon and Passaron). To the east and over the gorge the fortified position of Chouliarades¹¹ and to the south the fort of Raftanaioi¹² are in visual contact with the site, although at a distance of more than 3 km. The Ambelochori tower is not visible, nor is the most important fortified settlement of the region, found at Kaletzi to the south.¹³

¹¹ Soulis 1932, n. 1; Hammond 1967, 176; Filos 2000, 27; Aggeli 2001, 81.

¹² Filos 2000, 27; Aggeli 2001, 81.

¹³ Dakaris 1956, 59; Hammond 1967, 154; Vlahopoulou-Oikonomou 2003, 72.

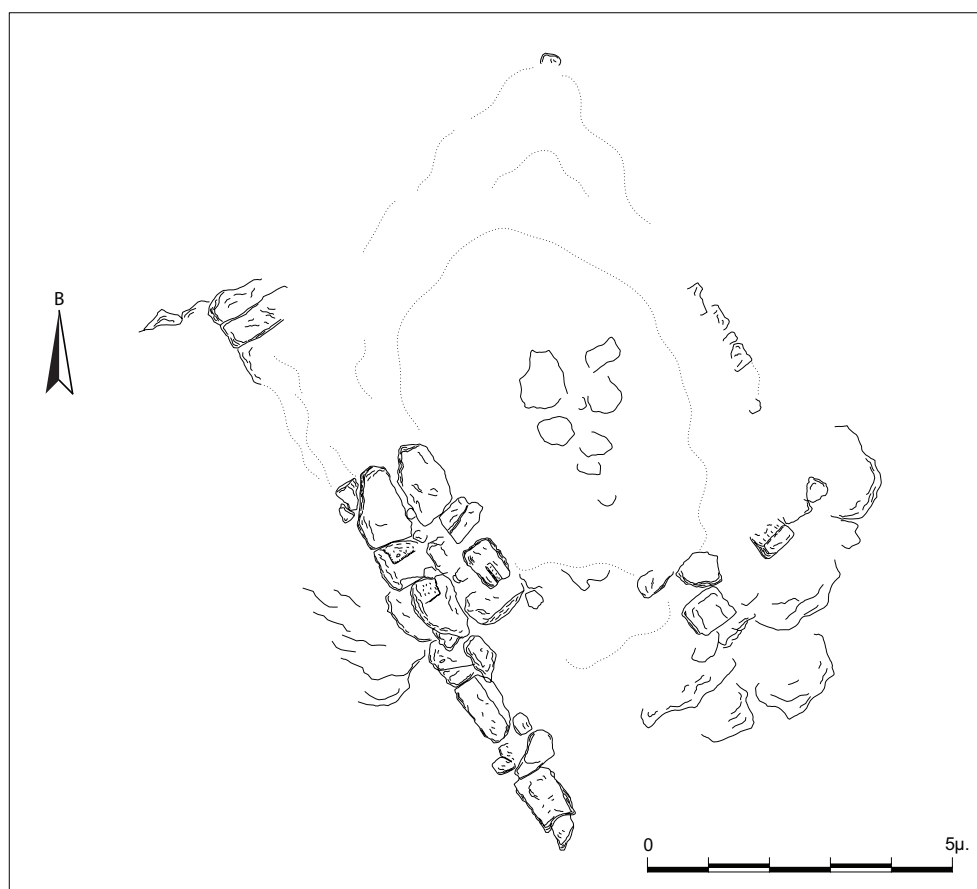


Fig. 6 Plan of the tower at Tsouka (drawing by the author).

Our next case study, Kastri of Psina, is located approximately 1 km to the north of the modern village of Psina, north of the valley of ancient Dodona and on the eastern foothills of the mountain Megas Longos. The site overlooks the valley and hills around the river Smolitsas, a tributary of the Kalamas, and is today covered by dense oak vegetation. It is a narrow ridge, less than 20 m wide, running north–south and is approached from its southern end (Fig. 7). Kastri was first reported by Hammond who had visited the site during his archaeological itineraries.¹⁴ Hammond reports an oblong circuit wall covering an area with a length of about 650 paces over the ridge; he mentions no tower but only recesses in the wall. He does, however, publish a sketch which clearly shows a rectangular building with a wall attached to it. The tower, which is the most prominent feature of the site, is a large rectangular building, measuring 10.5 m by 7 m (Fig. 8; Fig. 11). It is located on the ridge's highest point and its walls follow the sloping sides of the ridge. Three



Fig. 7 The site of the tower at Psina (photo: Ch. Kleitsas).

of its angles still preserve the peritena of the original structure. At the tower's north-east angle the wall is preserved for a height of almost 2 m with four courses

¹⁴ Hammond 1967, 190–1, plan 22.1B; Dakaris 1956, 59; Dakaris 1972, 94.

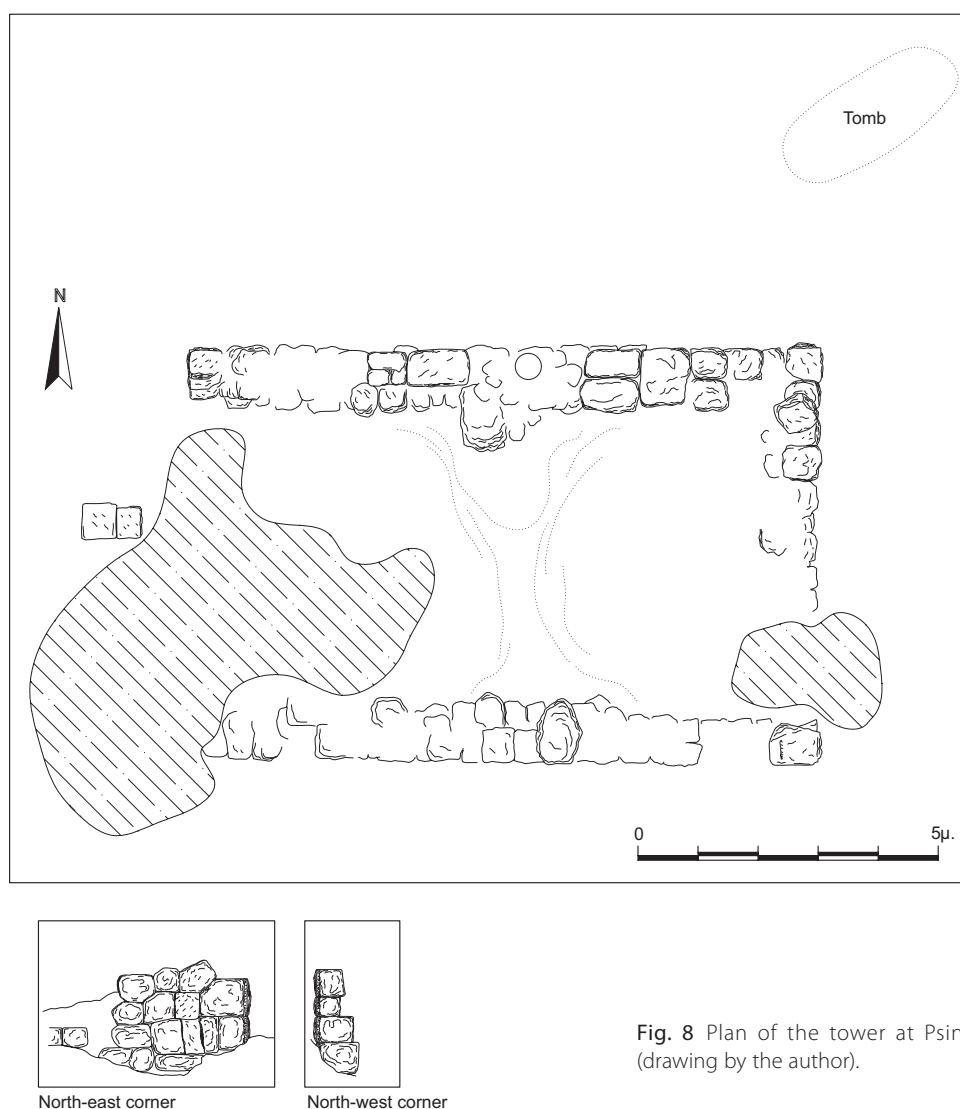


Fig. 8 Plan of the tower at Psina (drawing by the author).

of rectangular and polygonal blocks (Fig. 9). The walls have a thickness of 1 m and are composed of header-stretchers double blocks. Approximately at the tower's centre the remains of a partition wall are still visible. No traces of any entrance survive. At the middle of the tower's west side the poorly preserved remains of a wall extending out perpendicular from the tower is the only part visible from the circuit wall that Hammond notes seeing. A significant part of the tower must have been quarried by locals, as indicated by the large quantity of small stones covering parts of the building (Fig. 10). A tomb was excavated sometime in the 20th century right next to the tower's north-east corner and its shaft is still visible today; a Hellenistic lacrimatorium was reportedly

found in it. Hammond also mentions that a shrine was found somewhere near the modern village along with six female figurines dating to the end of the 5th or the 4th century BC.¹⁵ The site offers a clear view towards the south where the valley of the Dodona oracle lies, to the east and north and also looks over the road following the foothills of Megas Longos to the west.

Although the Psina tower is not supposed to have been isolated, it does not form a coherent part of any proper fortification wall. The circuit wall noted by Hammond must have functioned as a courtyard wall around the tower, which was the centre of the fortifications of Psina.

¹⁵ Hammond 1967, 191.



Fig. 9 The north-east corner of the tower at Psina (photo: Ch. Kleitsas).



Fig. 10 The west half of the tower at Psina (author's photo).

Discussion

None of the three case studies has been excavated properly, thus their exact date remains questionable. It is, nevertheless, highly unlikely that any of them date before the middle of the 4th century BC, since it seems that very few fortifications of any kind were erected before that period in Molossia.¹⁶ Hammond dates the majority of Epirotan forts well within the 3rd century BC (280–230 BC) and relates them with the military tactics of King Pyrrhus, who was believed to have been very keen on fortifying

camps and erecting forts.¹⁷ The lacrimatorium found near the Kastri of Psina suggests a possible date around 300 BC. The building techniques, although unable to offer secure dating, are quite similar to the mixed isodomic, pseudo-isodomic and polygonal walls of other Hellenistic fortifications in Molossia that date after 300 BC.

Certain construction attributes are common in all three Molossian towers. They all incorporate large ashlar blocks, roughly hewn on their faces, along with smaller blocks of various kinds. At Ambelochori and Psina, where corner stones are preserved (Fig. 3; Fig. 9), an elaborate peritenaia band is used at every corner of the structure, an element very conspicuous in many other Molossian fortifications and buildings.¹⁸ Equally common is the mixed technique of large monumental corner stones and smaller ones put together in a polygonal or pseudo-isodomic way, a technique most probably dictated by the availability of building materials. All stones are apparently local limestone, most probably quarried from sites near the towers. Foundations were most probably filled with rubble and earth and wooden floors must have existed at the upper levels. A partition wall must have divided the towers in two, adding to their structural coherence (Fig. 11). Tile fragments around the towers also indicate that the towers were originally covered with tiled roofs.

The design and dimensions of the towers also share similarities. Both Tsouka and Psina have very similar dimensions (c. 11 m by 7 m) and both seem to have been divided by a perpendicular wall. The Ambelochori tower appears to have been smaller (c. 9 m by 7 m), but the whole design seems to correlate with the design of the other towers. Entrances unfortunately do not survive, but this is very common in many towers of ancient Greece, where doors were placed at a higher level in the walls and were accessible by a wooden ladder.¹⁹ The towers' original height can only be speculated, but something like 10–11 m would be reasonable.²⁰

All the case studies are excellent natural observation points. They offer an ample view and oversee the areas surrounding them. They can also easily monitor the roads and paths running around them; Tsouka controls the path leading to the south of Molossia (which is still in use) and the passages running along the river Arachthos whereas

¹⁶ Ceka 2008.

¹⁷ Hammond 1967, 572, 659–61. Although Dakaris proposes a date at the end of the 5th century BC for certain city walls like that of Passaron (1987, 72), both Hammond and Ceka firmly support later dates for most of the fortifications.

¹⁸ Hammond 1967, 584.

¹⁹ Young 1956a, 136.

²⁰ On the width to height ratio of ancient Greek towers, see Young 1956a, 135.

Psina controls the roads leading from the north and west through the valley of the river Smolitsas towards the Dodona sanctuary. The towers at Tsouka and Psina are also built on steep and easily defensible narrow ridges, actually blocking their most accessible side, thus securing the whole ridge enabling it to be used as a refuge during emergencies by the local population. The scattered pottery on the Tsouka ridge is an indication that this narrow area was actually used as such. The Molossian towers seem to have no contact with agricultural areas since none of them can be connected to any valley or plateau as other fortifications in Epirus can.²¹ The Psina tower is also the only case where a settlement (most probably an unfortified 'kome' hamlet) is located within a reasonable distance from the little stronghold.

Concerning visual contact with other sites, fortified or not, no pattern seems to emerge. The Tsouka and Ambelochori towers are in visual contact with the sites on the opposite side of the Arachthos gorge, which, however, lie at a distance of 3–5 km away and it is questionable whether these areas did actually belong to the Molossian territory when the towers were erected, or to the federation of the Athamanian tribes.²² Furthermore, the Tsouka tower has no contact whatsoever with the main fortified sites and cities of the Ioannina valley. As for the Psina tower, the only visible fortification is the small fort above the village of Lyngos, the dating of which is still obscure. The hills totally prevent any visual contact with the sanctuary of Dodona, located a short distance to the south-east.

A comparison between case studies

The small number of towers in Molossia cannot (for the time being) be considered an actual tower network when compared with the vast and elaborate networks of southern Greece;²³ a few initial comparisons can, however be made.

In terms of construction the Molossian towers share similarities with the towers of Leukas,²⁴ both being rather sturdy, well-built constructions, where great care has been taken to ensure the monumentality of the (most probably all stone-built) edifice. The sturdy masonry of the Molossian towers follows methods widely used in Classical and Hellenistic fortifications of many types around Greece.

In terms, however, of dimension or ratios, no exact parallels can be found, since most of the known towers of Greece were predominantly rectangular or round.²⁵ Very few towers in Keos²⁶ seem to share the elongated plan of the Molossian ones, but their construction is totally different and it is difficult to argue for a Cycladic influence in ancient Epirus. On the other hand, the division of the Molossian towers into compartments seems to be similar to some towers of Leukas²⁷ and Boiotia,²⁸ although no evidence survives in Molossia for any actual rooms within the towers, apart from the central division wall.

It is equally difficult to establish any close parallels between the Molossian towers and the other tower networks with regard to visibility and use. The Molossian examples cannot be related to any agricultural production or mining and quarrying activities like the towers of Leukas, Laurion, Sifnos and Thasos.²⁹ This is to be expected for a largely pastoral and rather than agricultural economy like the Epirotan one. The similar plan of the towers of Molossia could also be an indication that they were all built by a central authority and not by individual citizens (wealthy farm owners), something which strongly supports their use as guarding posts of important roads and landmarks of state authority. Another difference with many towers of southern Greece is the lack of any effective visual contact with other forts and cities, something which makes their use as beacons very unlikely. Finally, the use of the towers as points for monitoring and controlling slaves working in the countryside, as recently suggested for many other

²¹ Dausse 2008, 164.

²² Hammond 1967, 684.

²³ For a general and reasonably up-to-date bibliography on the Greek towers see Morris & Papadopoulos 2005.

²⁴ Morris 2001.

²⁵ For Attica, see Young 1956a and Lohmann 1992; for Boiotia, see Camp 1991; for Thasos, see Osborne 1986; for Keos, see Cherry et al. 1991; for Leukas, see Morris 2001.

²⁶ Cherry et al. 1991, 287.

²⁷ Morris 2001, 312–17 (towers of Palaiokatouna, Mavroneri, Skaros 6).

²⁸ Camp 1991, 197.

²⁹ For Leukas see Morris 2001, 341–3; for Laurion see Young 1956a, 140–3 and Lohmann 1992; for Siphnos see Young 1956b and Ashton 1991; for Thasos see Osborne 1986, 175.

cases,³⁰ is equally unlikely, since no connection has yet been discovered between the Molossian towers and agricultural activities.

Conclusions

It is clear that the creation of isolated towers was not a common practice in Molossia. Only the three examples presented above have been as yet identified, making their existence even more important and at the same time difficult to explain. Furthermore, none seem to be part of any defence network of towers, outposts or 'fryktores' beacons. The relation with the borders of Molossia is also questionable, since both east and west borders seem to have been further away from the location of the towers, although the actual location of these borders remains unclear.³¹ There is no connection either with farmsteads or any kind of productive facilities like mines. This does not, however, mean that the towers are unrelated to each other or with the other fortifications of the region. Similarities in dimensions, design and construction strongly indicate that all three buildings were part of the same fortification project³² and can be dated sometime after 300 BC. It seems more likely that the Molossian towers were associated with the control of certain areas and most probably with passages and roads.³³ This is not unlikely in ancient Epirus, since most of the existing forts can be associated in one way or another with the control of the main roadways, which often lie next to river banks. One of the finest examples is the Gefyra Zeta wall, a strong and elaborate fortification which practically blocked the main road to Molossia from the south through the gorge of the river Louros.³⁴ The frequency with which invaders (especially the Illyrians) raided the country during the early 4th century BC³⁵ must have forced the Molossian authorities to fortify strategic passages and create strongholds, shelters for local inhabitants and observation points that could house a small garrison and monitor any movement along the passages. Control over the movement of semi-nomadic shepherds and their flocks,³⁶ taxation and protection

against theft could also have been reasons behind the erection of the towers.

The importance of these towers must, nevertheless, have been more than practical; in a landscape largely dominated by small villages, pens and huts, these 10 metre-high stone-built towers must have formed landmarks of state authority and power, marking the existence of a strong state and offering (or imposing) to the locals a feeling of security, helping consolidate the unification of Epirus under Molossian rule.³⁷

Many questions, however, remain unanswered. What is the exact dating of the Molossian towers? Does their location correspond with the borders of Molossia with the other contemporary states? Why do no other similar towers survive in such a heavily fortified region? Was there a foreign influence underlying the erection of these structures?

Further study of the Molossian fortifications is required to offer answers to these questions. Excavation and topographical survey of these monuments would help us understand this unique network of fortifications and relate it to the history of ancient Epirus and Greece.

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³⁰ Morris & Papadopoulos 2005.

³¹ Dausse 2008, 165.

³² See Osborne 1986, 173: 'Towers built for a single purpose might be expected to have a more or less uniform situation'.

³³ Dausse 2002.

³⁴ Vlahopoulou-Oikonomou 2007, 300–4.

³⁵ Hammond 1967, 553.

³⁶ The importance of transhumance in the social and economic life of ancient Epirus has been underlined in many publications (for a collected bibliography, see Dausse 2008, 165, n. 52).

³⁷ Dakaris 1972, 191.

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LES TOURS ISOLÉES DE L'HISPANIE ROMAINE: POSTES MILITAIRES OU MAISONS FORTES ?

Pierre Moret

Résumé

On examine dans cette contribution la question des tours isolées et des bâtiments ruraux fortifiés qui apparaissent en grand nombre dans certaines régions de l'Hispanie méridionale entre la fin du II^e siècle av. J.C. et le début du I^{er} siècle ap. J. C. Ces édifices faisaient-ils partie d'un réseau militaire de surveillance du territoire, ou s'agissait-il de maisons fortes appartenant à des propriétaires privés ? Pour apporter des éléments de réponse à cette question, trois dossiers sont abordés. Le premier, celui des « tours d'Hannibal » mentionnées par Pline l'Ancien, pose deux problèmes : celui d'une possible origine punique de ce phénomène, et celui des réseaux défensifs macro-régionaux. En second lieu, le cas des maisons fortes de La Serena en Extrémadure soulève, à l'échelle d'un territoire limité, la question des rapports entre tours rurales et exploitation minière. Enfin, l'exemple du Castelo da Lousa, au Portugal, montre comment l'apparence extérieure d'une maison-tour faisant partie d'un domaine rural a pu inciter de nombreux auteurs à l'identifier, à tort, comme un fortin militaire.

Introduction

Le dossier des tours isolées de l'Hispanie romaine est un cas d'école qui illustre à merveille les difficultés parfois insurmontables que rencontre l'historien quand il s'efforce de donner corps aux récits des historiens anciens en recourant à des données archéologiques, ou l'archéologue quand il a l'ambition de comprendre la fonction des vestiges qu'il a mis au jour en s'appuyant sur les textes. Faute d'une approche suffisamment critique de ces deux catégories de sources, faute de tenir compte de leurs limitations respectives et du décalage irréductible de leur potentiel informatif, les interprétations qui se sont succédé pendant les dernières décennies ont fini par obscurcir les données de base d'un problème que l'on peut résumer par le dilemme suivant : ces édifices isolés

et fortifiés faisaient-ils partie d'un réseau de surveillance militaire du territoire, ou s'agissait-il de bâtiments ruraux à fonction plus ou moins spécialisée, mais qui en tout cas résultaient d'initiatives privées et ne relevaient pas de la sphère militaire ?

Rappelons tout d'abord brièvement le contexte historique. À partir de 236 av. J.-C., l'Hispanie entre en jeu dans le conflit global des puissances méditerranéennes, du fait de la mainmise carthaginoise sur le sud de la péninsule. Il fallut ensuite deux siècles, entre le déclenchement de la seconde guerre punique (219 av. J.-C.) et le milieu du règne d'Auguste, pour que la péninsule Ibérique rentre toute entière dans l'empire de Rome. Pendant cette très longue période d'affrontements militaires, la frontière entre les zones contrôlées militairement

par le conquérant et les territoires indépendants a constamment varié, se déplaçant vers l'ouest et vers le nord. Dans un tel contexte, la première question qu'il faudra se poser est celle de savoir si la défense de ces frontières successives a fait appel à des ouvrages fortifiés, et d'autre part si la défense des territoires soumis, à l'intérieur de ces limites mouvantes, a nécessité des mesures spécifiques dans le domaine de l'architecture militaire et de la fortification.

Quelques textes anciens peu nombreux, sur lesquels nous reviendrons, évoquent des tours (*turres* en latin, *purgoi* en grec) qui apparaissent comme des éléments caractéristiques des paysages hispaniques pendant cette longue période de guerres ; et certaines de ces sources les associent même à la figure d'Hannibal. En vis-à-vis, le dossier archéologique est plus nourri, mais il souffre d'une grande hétérogénéité. Par souci de simplicité, j'utiliserai souvent dans cet exposé l'expression « tour isolée », pour éviter les longues périphrases que

nécessiterait une désignation plus exacte. En réalité, les constructions dont il sera question outrepassent assez largement la stricte acception du mot tour, si l'on admet que ce dernier devrait en toute rigueur être réservé à des bâtiments dont la hauteur est supérieure à la largeur. Je me référerai sous ce terme, ou parfois sous celui de « maison forte », à des bâtiments qui remplissent les trois conditions suivantes : être situés à distance des agglomérations, en position isolée ; avoir une forme simple et compacte, le plus souvent quadrangulaire, d'une superficie oscillant entre 100 et 500 mètres carrés ; présenter des indices de fortification. En ce qui concerne ce dernier critère, la mauvaise conservation de la plupart des vestiges oblige à se limiter à des indices qui ne sont que partiellement probants, tirés de l'observation des premières assises ou du soubassement des murs : grande épaisseur, appareil puissant, ouvertures réduites...

Ainsi définies, les tours rurales sont largement répandues en Hispanie, mais de façon discontinue (Fig. 1). Elles

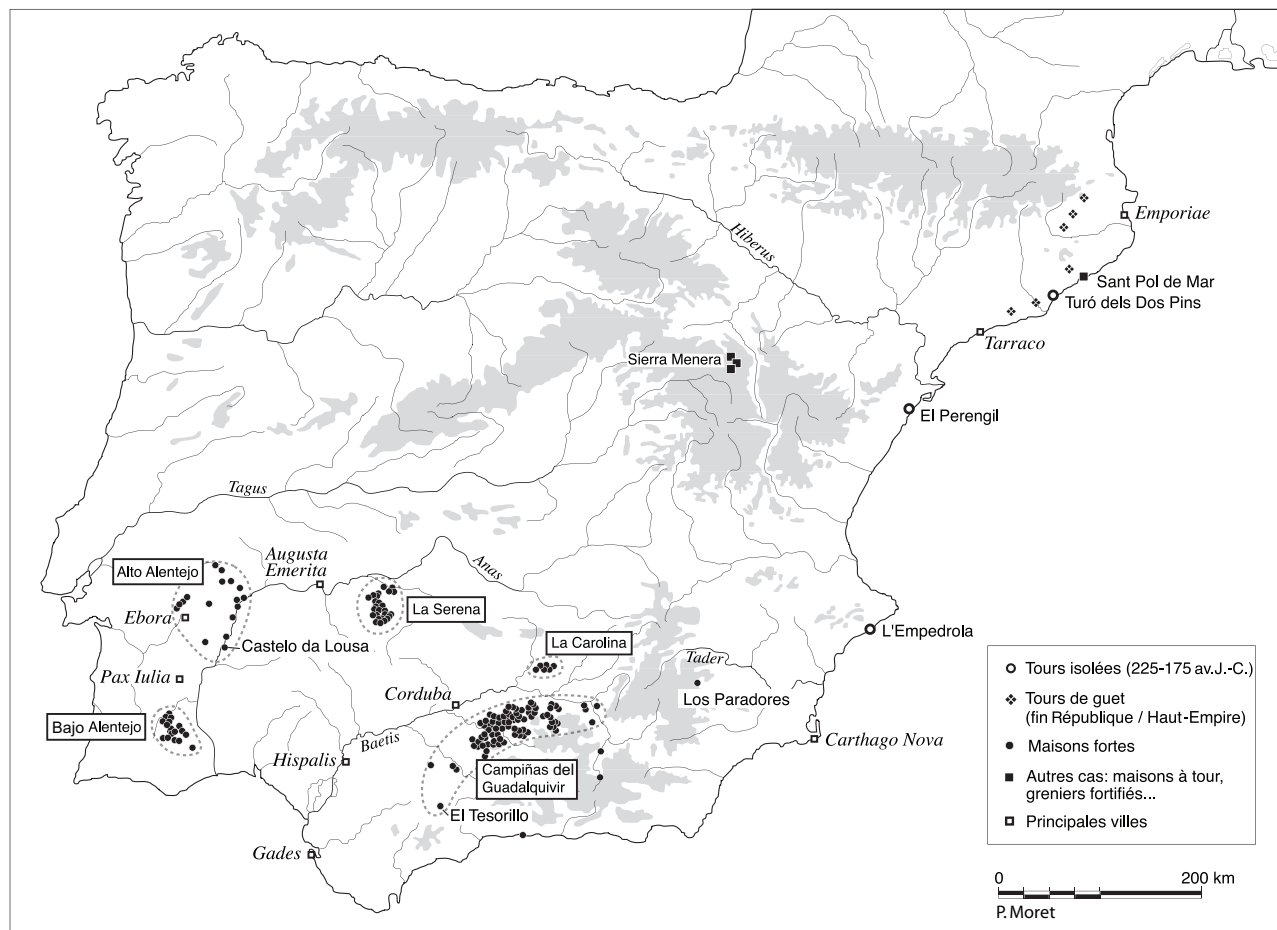


Fig. 1 Distribution des maisons fortes et des tours isolées (données partielles) dans la péninsule Ibérique (dessin P. Moret.)

se concentrent dans certains secteurs du bassin du Guadalquivir – en particulier les *campiñas* de la rive gauche, du Guadiana Menor au Genil,¹ et sur la rive droite le secteur minier de Linares et La Carolina –,² dans l'Alentejo portugais – Bas Alentejo à l'ouest de Mértola, Haut Alentejo entre Évora et le Guadiana³ – et dans le secteur de La Serena en Estrémadure espagnole.⁴ Ailleurs, les cas connus paraissent isolés. Il paraît impossible de donner une explication globale simple à cette répartition déséquilibrée. Les zones à haute densité de maisons fortes sont elles-mêmes très différentes entre elles. Le substrat préromain va de l'organisation urbaine ancienne d'une Bétique fortement marquée par l'empreinte phénicienne et punique, jusqu'au modèle villageois moins structuré de la zone turdule autour du Guadiana. Les ressources naturelles sont également très inégales : certains groupes de tours se trouvent dans des régions peu favorisées du point de vue agricole, comme les parties de l'Alentejo où se concentrent les tours rurales, d'autres dans des terroirs particulièrement fertiles, comme les *campiñas* de la Bétique, d'autres encore à proximité de districts miniers, dans la Serena et le secteur Linares – La Carolina. Enfin, le processus de romanisation connaît un rythme et une intensité différents d'une région à l'autre. Dans des conditions aussi contrastées, on est bien obligé d'admettre que la tour rurale et la maison forte ont servi de réponse, dans ces diverses régions, à des besoins différents. On peut certes parler de concepts architecturaux similaires, mais qui s'inscrivent dans des processus indépendants.

Quant à la chronologie des édifices que nous rassemblons ici sous l'étiquette large de tours isolées ou de maisons fortes, elle est un des éléments-clés du débat et nous y reviendrons à propos de plusieurs cas particuliers. En termes généraux, les datations obtenues jusqu'à présent, que ce soit dans le sud du Portugal, en Estrémadure ou en Andalousie, se situent toutes dans un contexte romain, au plus tôt vers la fin du II^e siècle av. J.-C., et le plus souvent entre le milieu du I^{er} siècle av. J.-C. et l'époque julio-claudienne.⁵

L'approche que je souhaite privilégier dans cette contribution est d'ordre méthodologique. Trop souvent en effet, l'utilisation privilégiée des informations fournies par l'historiographie romaine, et plus largement par les

sources écrites, a conduit à surévaluer la composante militaire et défensive de certaines catégories de bâtiments antiques connus par l'archéologie. Je commencerai par trois études de cas, choisies parmi beaucoup d'autres, qui illustrent la diversité et la complexité des dossiers archéologiques autour desquels s'est engagée, depuis une vingtaine d'années, une controverse alimentée par de nombreuses publications, en Espagne et au Portugal, sur le rôle des fortifications isolées dans la défense des territoires hispaniques. Ces exemples permettront de mesurer la profonde ambiguïté des informations fournies par la simple étude architecturale des vestiges, et d'alerter sur les risques qu'entraîne toute interprétation fondée sur des a priori historicisants, surtout quand elle s'effectue au prix d'une sélection, nécessairement biaisée, des informations considérées comme pertinentes.

Le premier exemple concerne les Carthaginois et suppose l'existence d'un réseau défensif macro-régional, à partir des énigmatiques *turres Hannibalis* de Pline l'Ancien. Le second exemple réduit l'échelle à un territoire micro-régional, le canton de La Serena en Extrémadure. Le troisième exemple permet, pour la même période, de faire un gros plan sur un bâtiment isolé, le Castelo da Lousa, particulièrement bien fouillé et objet de nombreuses publications qui font de lui un cas emblématique.

Les « tours d'Hannibal » : un mariage forcé entre textes littéraires et archéologie

Pour comprendre comment la notion de « tours d'Hannibal » s'est imposée aux archéologues et a pu être utilisée à tort et à travers pour désigner des bâtiments qui ne correspondent en rien aux descriptions des auteurs anciens, il convient de remonter au milieu du XX^e siècle. Dans une synthèse sur l'architecture ibérique, Antonio García y Bellido fut le premier à mettre en rapport les mentions littéraires antiques de tours isolées hispaniques, dont certaines portaient le nom de *turres Hannibalis*, avec un petit nombre de vestiges archéologiques connus à son époque.⁶ Quelques années plus tard, Javier Fortea et Juan Bernier découvraient lors de leurs prospections dans la Campiña de Córdoba, en Andalousie, des dizaines

¹ Fortea & Bernier 1970 ; Carrillo 1999.

² Torres & Gutiérrez 2004.

³ Fabião 2002 ; Mataloto 2008 ; Teichner & Schierl 2010.

⁴ Rodríguez et Ortiz 2003 ; Mayoral *et al.* 2011.

⁵ Moret 2010 ; Teichner & Schierl 2010 ; Mayoral *et al.* 2011.

⁶ García y Bellido 1945, 591–5 ; García y Bellido 1954, 414–22.



Fig. 2 Tour rurale de El Comendador (Porcuna, Córdoba; cliché P. Moret).

d'« enceintes fortifiées ».⁷ Ce terme imprécis regroupait des bâtiments isolés d'un type caractéristique : carrés ou rectangulaires, d'une superficie variable, allant parfois jusqu'à 700 m², ils présentent l'aspect d'une fortification grâce à des murs de grande épaisseur et à un puissant appareil fait de blocs mégalithiques frustes ou de pierres de taille à bossage rustique (Fig. 2 et 3.f). S'appuyant sur les travaux de García y Bellido, ils interprétèrent ces *recintos fortificados* comme des tours de guet ibériques qui avaient pour fonction de surveiller un axe d'échanges et de communications entre la région de Castulo et celle de Málaga,⁸ et qui furent réutilisées par les Carthaginois au moment de la seconde guerre punique – d'où le nom qui leur serait resté de « tours d'Hannibal ».

Les travaux de García y Bellido et de Fortea et Bernier exercèrent une forte influence jusqu'à la fin des années 1990. Ils entretenirent l'illusion d'une relation directe entre le dossier littéraire des *turres Hannibalis* et le dossier archéologique des *recintos fortificados* de la Bétique. Plus largement, ils imposèrent l'idée d'une fonction essentiellement militaire pour la plupart des réseaux de tours isolées ou de maisons fortes qui furent découverts par la suite dans l'Alentejo portugais,

dans le haut Guadalquivir et en Estrémadure. Et ce n'est pas un hasard si le mot latin *turris* a été souvent utilisé pour désigner ces constructions, y compris dans des publications archéologiques qui n'abordent pas la question des sources littéraires.⁹ Récemment encore, les « tours d'Hannibal » sont citées dans des travaux d'historiens et d'archéologues comme des indices sûrs d'une domination barcide dans le sud de l'Espagne.¹⁰

L'interprétation de García y Bellido se fonde sur deux passages du *Bellum Hispaniense* concernant la Bétique à l'époque des guerres civiles (8.3 et 38.3), un passage de Tite-Live (22.19.5–7) concernant les *turres* du Bas Èbre en 217 av. J.-C., et des textes de Tite-Live (25.36) et de Pline l'Ancien (*HN* 3.9) qui permettent de situer en Haute Andalousie la tour isolée dans laquelle périt Cn. Scipion en 211 av. J.-C. La relecture de ces textes¹¹ montre en fait que le terme *turris* correspond à des réalités qui n'ont pas de rapport avéré avec les vestiges archéologiques connus en Andalousie sous le nom de *recintos fortificados*. Dans le livre 22 de Tite-Live, *turris* est une désignation métonymique qui se réfère à de très petits habitats fortifiés, et non pas à des tours de guet isolées. Dans le chapitre 8 du *Bellum Hispaniense*, le même mot ne désigne pas non plus des constructions isolées, malgré les apparences : il se réfère en réalité aux tours d'enceinte d'agglomérations secondaires éloignées des villes.¹² Dans deux autres textes (*Bell. Hisp.* 38.3 et *Liv.* 25.36), s'il est bien question de tours isolées, leur forme n'est pas décrite et elles apparaissent situées dans des régions où l'archéologie n'a rien retrouvé qu'on puisse rattacher aux catégories architecturales reconnues en Bétique et dans le sud de la Lusitanie. Reste la mention par Pline l'Ancien des « tours d'Hannibal », souvent invoquée, et qui exige un peu plus d'attention.

HN 35.169 :¹³ « Et puis n'y a-t-il pas, en Afrique et en Hispanie, des murs de terre appelés *formacei*, qui durent des générations, inattaquables à la pluie, au vent, au feu, et sont plus solides que toute espèce de mortier ? Aujourd'hui encore, l'Hispanie peut voir les postes de guet d'Hannibal et ses tours en terre placées sur les crêtes des montagnes. »

⁷ Fortea & Bernier 1970.

⁸ Fortea & Bernier 1970, 131–2. Les prospections réalisées depuis lors ont vite rendu cette idée caduque : les tours ne s'organisent nullement le long d'un axe nord-sud, et ne sont pas plus nombreuses le long des principales voies de communication qu'à l'écart de celles-ci.

⁹ Par exemple Ruiz & Molinos 1993.

¹⁰ Almagro & Torres 2007, 48.

¹¹ Moret 1990, 21–5 ; Moret 1995, 553–7 ; Moret 2004 ; Moret 2010.

¹² Moret 1995 ; voir aussi Pseudo-César, *Guerre d'Espagne* (trad. et éd. N. Diouron, 1999) 72–4.

¹³ « Quid ? non in Africa Hispaniaque e terra parietes (...) aeuīs durant, incorrupti imbribus, uentis, ignibus omniū caemento firmiores ? Spectat etiam nunc speculas Hannibalis Hispania terrenasque turres iugis montium impositas ».

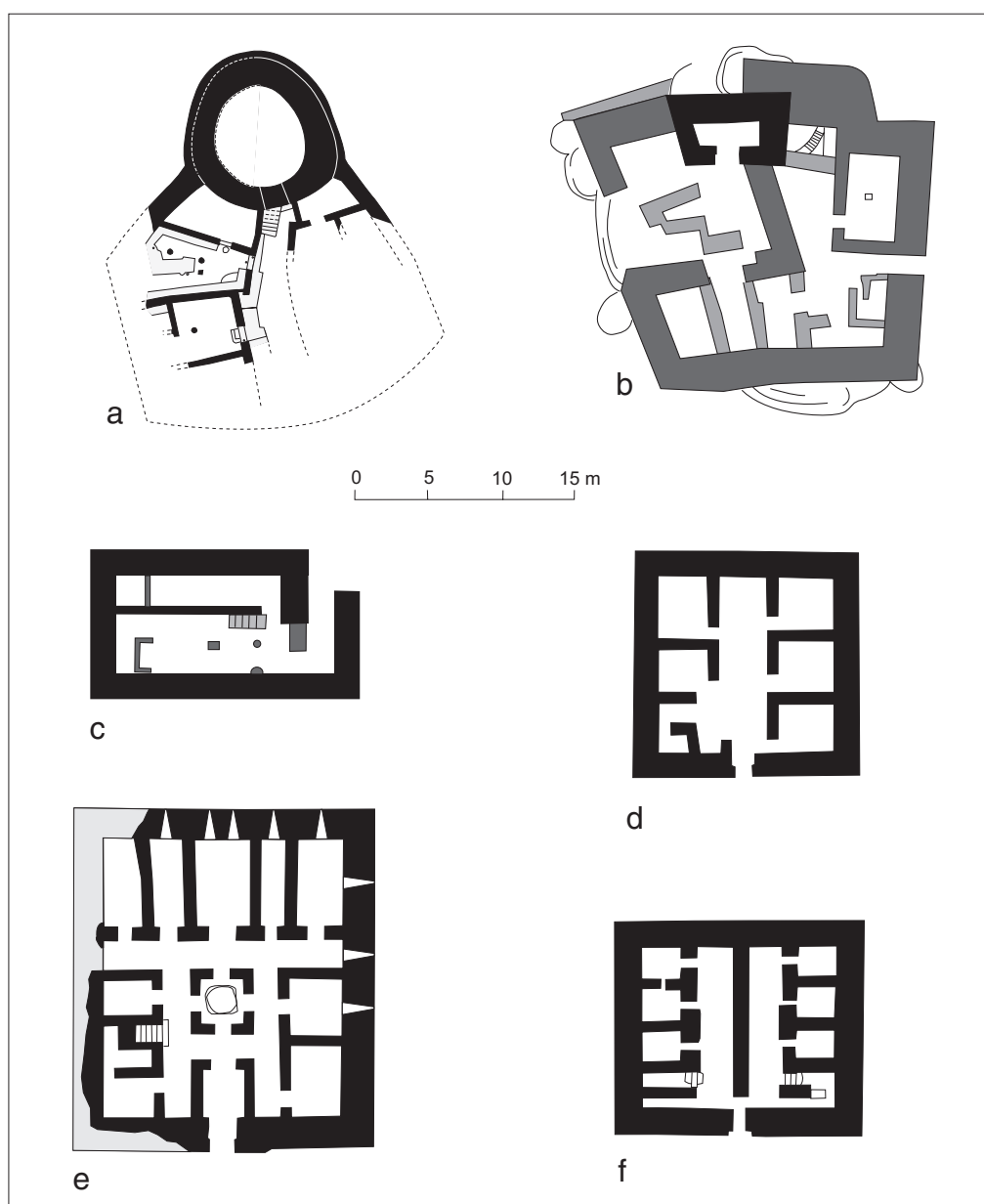


Fig. 3 Plans de quelques maisons fortes hispaniques. **a** : Torre Cremada (Valdeltormo, Teruel) ; **b** : Hijovejo (La Serena, Badajoz) ; **c** : El Perengil (Vinaròs, Castellón) ; **d** : Castelinho dos Mouros (Castro Verde) ; **e** : Castelo da Lousa (Mourão) ; **f** : El Tesorillo (Teba, Málaga). (Dessin P. Moret.)

Ce texte est complété par une allusion dans un autre passage de l'*Histoire naturelle* : à propos de la transmission des signaux lumineux à longue distance, Pline évoque les « nombreuses observations faites en Afrique et en Hispanie sur les tours d'Hannibal », et le fait qu'en Asie, « un système analogue de protection par des postes de

guet a été mis en place à cause de la peur des pirates » (HN 2.181).¹⁴

Dans ces deux passages, le point de vue de Pline n'est pas celui d'un historien qui s'intéresserait aux réalisations du général carthaginois ou aux événements de la seconde

¹⁴ « Multis hoc cognitum experimentis in Africa Hispaniaque turrium Hannibalis, in Asia uero propter piraticos terrores simili specularum praesidio excitato (...). »

guerre punique. Il traite dans l'un d'une question d'optique et d'astronomie, dans l'autre du fait que ces tours, bien que très anciennes, soient restées intactes grâce à leur technique de construction en pisé. Leur nom est anecdotique : Plin s'est simplement contenté d'enregistrer une appellation qui devait être courante au premier siècle de notre ère, au moment de son séjour en Hispanie comme procurateur, vers 73 ap. J.-C. (d'où l'usage du présent et l'expression *etiam nunc*). Il nous livre tel quel un nom consacré par l'usage, sans le discuter et sans se préoccuper de son éventuelle signification historique. Il existait certainement à l'époque de Plin de vieilles tours en pisé que les habitants de la région attribuaient à Hannibal ; mais on ne peut absolument pas en déduire qu'elles remontaient réellement au III^e siècle av. J.-C. On peut même en douter, si l'on pense à un phénomène bien connu à d'autres époques, par lequel tout vestige fortifié ancien dont l'origine est oubliée est attribué à un conquérant dont le souvenir a durablement marqué l'imagination populaire.

Au faux-semblant historique s'ajoute un problème de localisation géographique. Plin parle de l'Hispanie, sans aucune précision, mais aussi de l'Afrique. Le rapprochement qu'il établit par ailleurs avec un réseau de surveillance mis en place en Asie contre les pirates suggère qu'il s'agissait de postes de guet littoraux, placés sur les hauteurs du rideau de montagnes ou de collines qui borde une grande partie du littoral méditerranéen hispanique. Or, les *recintos fortificados* de Fortea et Bernier se trouvent loin dans l'intérieur des terres, en plein cœur de la vallée du Guadalquivir, et les autres ensembles connus sont également intérieurs.

De plus, Plin évoque un système de guet (*specula*) et de transmission de signaux qui suppose l'existence de réseaux linéaires fonctionnant sur de grandes distances, de sommet en sommet. Or, ces positions systématiquement dominantes et cette disposition linéaire ne se retrouvent pas, ou ne se retrouvent que très minoritairement, dans les maisons fortes hispaniques : la plupart sont bâties sur des éminences secondaires, des buttes modestes, voire des versants.¹⁵ Elles ne forment pas des lignes le long des voies de communication, mais des semis souvent très denses autour des villes. L'exemple le plus frappant de ce type de distribution est fourni

par l'*oppidum* de Torreparedones (Baena, Córdoba), avec pas moins de 40 tours qui se pressent dans un rayon de 5 km tout autour du centre urbain.¹⁶ Compte tenu de ce type d'implantation et de cette densité, toute fonction militaire est exclue : on a clairement affaire, autour de Torreparedones comme autour d'autres *oppida* de la région, à des tours rurales privées.

Dernière difficulté : Plin décrit avec précision des tours en terre qui sont bâties suivant la technique du pisé banché (*parietes formacei*). Ces informations ne correspondent guère aux constructions andalouses étudiées par Fortea, Bernier et leurs successeurs. Il est certes possible que le pisé ou l'adobe fussent employés dans leurs superstructures,¹⁷ mais c'est leur appareil de pierres de taille, parfois conservé sur plus de deux mètres de haut, qui devait frapper l'attention des voyageurs, et non la terre de leurs parties hautes.

Les points de contact sont donc extrêmement limités entre les informations livrées par Plin et les données archéologiques dont nous disposons aujourd'hui. Il serait cependant erroné de se fonder sur ce constat négatif pour affirmer qu'il n'existait pas de véritables tours de guet à l'époque des guerres puniques dans certaines régions de l'Hispanie préromaine, et notamment dans les régions marquées par la présence carthaginoise. En effet, des découvertes récentes attestent l'existence, sur le littoral méditerranéen, de tours isolées d'un type original. À l'Empedrola (Calpe, Alicante) a été mise au jour une tour isolée rectangulaire de 10,6 × 8,2 m, datée du IV^e siècle av. J.-C. par des amphores puniques.¹⁸ Il est fort possible, compte tenu de la date et du lieu, qu'on soit en présence d'une tour de guet rattachée à un réseau de surveillance côtière. Un peu plus au nord, la tour d'El Perengil (Vinaròs, Castellón), est un bâtiment rectangulaire de 18,5 × 11,2 m, bâti pendant la seconde guerre punique ou au tout début de l'occupation romaine (Fig. 3.c).¹⁹ La grande épaisseur de ses murs et la présence d'un escalier permettent de restituer sans difficulté plusieurs étages : il devait donc s'agir d'une tour particulièrement imposante. Elle se dressait, en position isolée, au sommet d'une colline assez basse mais qui se détachait nettement de la plaine côtière, à 5 km de la côte. Tour de guet ? Le bâtiment paraît trop grand et trop complexe pour cet usage, et le lieu mal choisi.

¹⁵ Moret 1990, 27.

¹⁶ Morena López 2007.

¹⁷ Un cas de construction en pisé, au-dessus d'un soubassement en pierre, a été récemment confirmé par les fouilles en Estrémadure, sur le site du Cerro del Tesoro (Mayoral & Vega 2010, 227).

¹⁸ Sala 2006, 142-4.

¹⁹ Oliver Foix 2001.

Fortin ? Maison-tour d'un type original ? La question reste ouverte. Mais ces tours ne ressemblent pas, ou pas complètement, à la description de Pline, pas plus que ne lui ressemblent les tours de guet de l'époque impériale en *opus quadratum* ou *vittatum* qui jalonnent certains axes du nord-est de l'Hispanie Citérieure.²⁰ Et surtout, elles ne sont pas situées en Andalousie, où depuis de nombreuses années, malgré la multiplication des fouilles, aucune donnée archéologique nouvelle n'est venue conforter l'hypothèse d'une origine indigène ou punique du phénomène architectural de la maison forte.

Les « recintos-torre » d'Estrémadure : réseau militaire romain ou habitat fortifié ?

Le canton de La Serena, dans la province de Badajoz en Estrémadure, offre une concentration remarquable de maisons fortes à l'appareil de grands blocs de pierre irréguliers, situées soit en terrain plat, soit sur des faibles ondulations de terrain, soit sur des sommets de collines.²¹ Les chercheurs qui les ont étudiées les premiers se sont d'abord demandé si cette concentration n'avait pas pour cause la proximité des filons de galène argentifère du secteur de Castuera, qui se trouve à proximité.²² De fait, Castuera fut à l'époque romaine un centre minier de premier ordre, dont les travaux comptent « parmi les plus denses et les plus importants de la Sierra Morena ». ²³ Il n'y a cependant pas d'indices d'une activité métallurgique dans les maisons fortes elles-mêmes. Par ailleurs, comment comprendre que le réseau formé par les maisons fortes et celui des mines antiques du district de Castuera soient séparés l'un de l'autre de plusieurs kilomètres ?²⁴

Une autre hypothèse a été proposée quelques années plus tard par les mêmes auteurs. On serait en présence d'un réseau de petits détachements militaires dont la mission aurait été de verrouiller les accès de cette importante zone minière, le long d'un axe de communication majeur, pendant la période des guerres civiles.²⁵ Un tel dispositif paraît tactiquement et logistiquement impraticable,

compte tenu de quatre facteurs : la dispersion de ces tours dans une zone d'environ 1200 km² ; leur éloignement des mines (toujours à plusieurs kilomètres, parfois à plus de 10 km) ; leur implantation non linéaire, qui ne recherche pas particulièrement les sites dominants et à grande visibilité ; leur nombre enfin, supérieur à trente, qui supposerait une fragmentation inutile et dangereuse du contingent militaire. L'architecture de ces bâtiments doit également entrer en ligne de compte. Les plans ne sont pas standardisés et les murs à l'appareil quasi cyclopéen ont un aspect impressionnant qui fait plus penser à la démonstration de puissance ostentatoire d'un propriétaire terrien qu'à un travail de castramétation romaine.

Des travaux menés récemment par une autre équipe dans la même région²⁶ jettent un éclairage radicalement différent sur ces « enceintes à tour ». ²⁷ Typologiquement, la plupart des sites présentent une maison-tour au milieu d'une enceinte quadrangulaire mégalithique. Chronologiquement, leur apparition se situe à un moment imprécis, mais sans doute tardif, du I^{er} siècle av. J.-C., et leur activité se prolonge au I^{er} siècle de notre ère. Elles se partagent en deux groupes : des fortifications de hauteur, en petit nombre, qui avaient certainement une fonction de contrôle et de surveillance ; et une majorité de maisons fortes de plaine, dont la construction dans un laps de temps relativement bref suggère un projet de mise en valeur agricole dans un secteur auparavant délaissé. Le lien avec l'activité minière de Castuera n'est pas retenu comme un facteur déterminant dans ces travaux récents. Il ne doit cependant pas être exclu a priori. En effet, la croissance rapide de l'activité minière, partout où elle se produisait, avait pour conséquence immédiate un afflux massif de main d'œuvre dans des régions jusqu'alors peu peuplées. D'où une demande soudaine de produits agricoles qui a pu provoquer, dans une dynamique spéculative directement dépendante de l'économie minière, la mise en culture de terres qui dans d'autres circonstances n'auraient pas attiré ces nouveaux exploitants. En même temps, l'afflux de migrants attirés par les mines ne pouvait manquer d'engendrer un climat d'insécurité qui rendait nécessaire la fortification de tout nouvel établissement, même en dehors du district minier

²⁰ Pagès 1988 ; Tura 1991.

²¹ Rodríguez & Ortiz 2003 ; Mayoral & Vega 2010 ; Mayoral *et al.* 2011.

²² Rodríguez & Ortiz 1989, 59–60.

²³ Domergue 1987, 28.

²⁴ Voir respectivement Rodríguez & Ortiz 1989, fig. 6, et Domergue 1987, carte 4.

²⁵ García-Bellido 1994–1995, Rodríguez & Ortiz 2003.

²⁶ Mayoral & Celestino 2010 ; Mayoral & Vega 2010 ; Mayoral *et al.* 2011.

²⁷ *Recintos-torre*, selon le terme le plus souvent utilisé en espagnol pour les désigner.

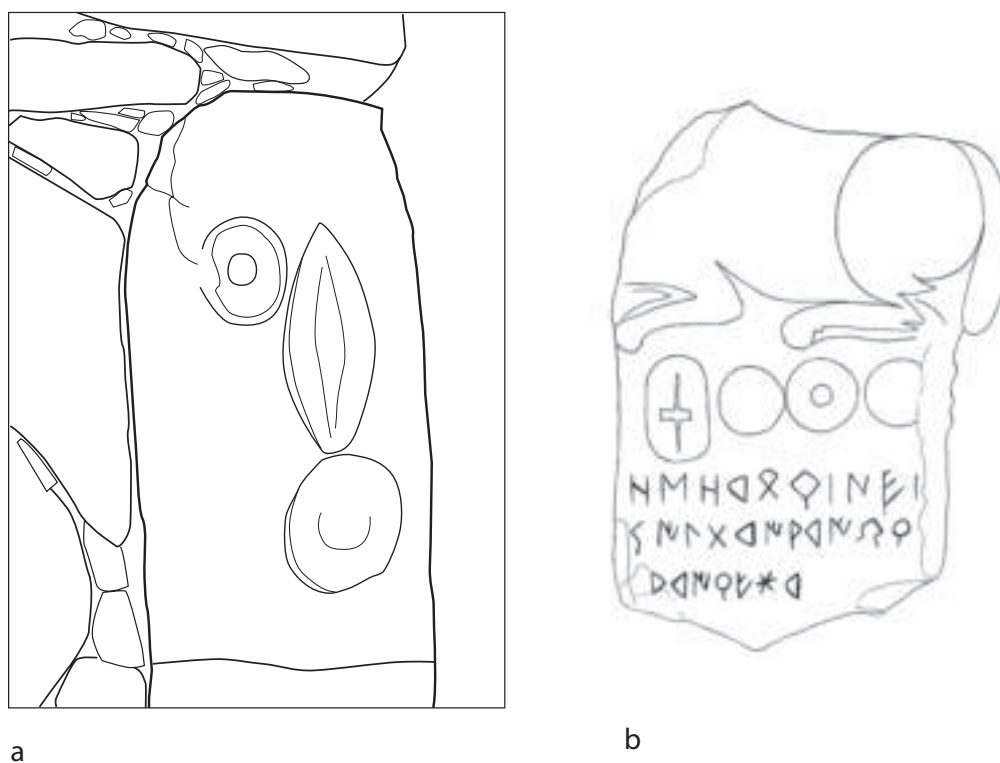


Fig. 4 Bas-reliefs représentant des boucliers hispaniques. a : Porte de la maison forte de Hijovejo (La Serena, Badajoz), d'après photographie ; b : stèle de El Acampador (Caspé, Zaragoza). (Dessin P. Moret.)

proprement dit. C'est dans ce contexte qu'il me semble possible de comprendre l'apparition soudaine de ce dense réseau de tours rurales. Mais à qui appartenaient-elles ?

Un élément de réponse à cette question se trouve dans un fruste bas-relief en pierre qui orne le piédroit de la porte d'une de ces maisons fortes, celle de Hijovejo, qui date dans sa phase initiale du I^{er} siècle av. J.-C. (Fig. 3.b et 4.a). On y voit représentés trois boucliers de deux types : deux *caetrae* rondes, typiquement indigènes, et un *scutum* allongé.²⁸ La présence dans ce bas-relief d'armes indigènes exclut d'emblée l'idée que les bâtisseurs et les habitants de la maison forte aient pu être des colons italiens. Des représentations similaires existent ailleurs dans le monde ibérique, notamment dans une série de stèles datant de la même époque qui ont été découvertes dans une région plus septentrionale de l'Espagne, le Bas Aragon : l'une d'elles représente une frise d'armes presque identique, formée par trois *caetrae* et un *scutum* (Fig. 4.b).²⁹ Le parallèle peut même être poussé plus loin

encore : dans le Bas Aragon comme dans la Serena, on voit apparaître au I^{er} siècle av. J.-C. une nouvelle forme d'habitat rural fortifié, caractérisée par la présence d'une tour monumentale (Fig. 3.a).³⁰ Ces frises d'armes paraissent donc véhiculer, dans l'iconographie, les mêmes valeurs que la tour dans l'ordre architectural : ce sont des attributs militaires dont s'enorgueillit une lignée aristocratique locale qui a préféré le manoir rural à l'*oppidum*. De ce point de vue, la maison forte de Hijovejo est la manifestation d'une nouvelle forme de pouvoir, exercée par les élites indigènes dans la phase initiale du processus de romanisation.

Le Castelo da Lousa : fortin ou maison-tour ?

Bâti sur un promontoire rocheux qui dominait le Guadiana,³¹ le Castelo da Lousa (Mourão, Évora) est un

²⁸ Ortiz & Rodríguez 2004, fig. 3.

²⁹ Beltrán Lloris 1996, fig. 176 : stèle d'El Acampador à Caspe.

³⁰ Moret *et al.* 2006, 106-31 (site de Torre Cremada à Valdeltormo).

³¹ Le site est aujourd'hui noyé dans un lac de barrage.



Fig. 5 Vue de la maison-tour de Castelo da Lousa (Mourão; cliché Deutsches Archäologisches Institut).

cas emblématique qui illustre dans toute son étendue la problématique des « tours » hispaniques : parce qu'il a fait l'objet d'une fouille exhaustive ;³² parce qu'il a donné lieu à deux interprétations contradictoires – militaire dans la plupart des études qui lui ont été consacrées,³³ civile dans quelques-unes –³⁴ ; et parce que c'est une construction réellement exceptionnelle par sa taille et sa complexité. Les fouilles récentes ont clarifié sa chronologie : la construction du bâtiment fortifié principal se situe vers le milieu ou un peu avant le milieu du I^{er} siècle av. J.-C., et le site est occupé jusqu'à l'époque augustéenne.³⁵

L'attribution d'une fonction militaire à cet établissement repose sur trois arguments principaux : i/ une architecture tenue pour militaire, avec des murs impressionnants de deux mètres d'épaisseur (Fig. 5), des fenêtres en forme de meurtrières et des petites pièces qui font penser à des casemates ; ii/ un emplacement stratégique à proximité d'un gué du Guadiana ; iii/ la pauvreté d'un territoire sans ressources agricoles, censée exclure l'hypothèse d'un établissement agricole. La date de construction du bâtiment principal, entre les guerres civiles de Sertorius et de César, a apporté des arguments à cette interprétation.

Mais cette impression doit être corrigée par une analyse plus approfondie des éléments d'architecture. D'abord, une surprise : ce prétendu fortin possède le plan d'une *domus* italique à *atrium* (Fig. 3.e). On y retrouve en effet les composantes essentielles de la maison romaine traditionnelle : vestibule, *atrium* avec un *impluvium* central ici matérialisé par une citerne de 8 m de profondeur, deux rangées latérales de pièces oblongues, deux *alae* et, enfin, dans l'axe des *fauces* et de l'*atrium*, une pièce agencée à la façon d'un *tablinum*, plus large que les autres. Les divergences par rapport au type classique s'expliquent par le fait que le bâtiment avait plusieurs étages. Le niveau résidentiel devait se trouver au premier étage ; le rez-de-chaussée, faiblement éclairé par d'étroites embrasures, devait être réservé à des fonctions de stockage. Les étroites embrasures doivent ainsi se comprendre comme des moyens de ventiler ces espaces de stockage des récoltes en les maintenant dans la pénombre. Malgré leur aspect, elles ne pouvaient servir d'archères, étant trop hautes (à 1,7 m du sol intérieur) pour permettre le positionnement d'un tireur.

En second lieu, la maison-tour n'était pas isolée. En contrebas s'élevaient sur plusieurs terrasses des installations agricoles reliées par des escaliers et des couloirs, formant un ensemble de 1700 m² ; une maie de pressoir à rainure circulaire a notamment été retrouvée dans un des locaux techniques de la terrasse inférieure. La présence de ces structures annexes, révélées par les fouilles de sauvetage récentes, est un argument décisif contre l'option militaire. La tour elle-même contenait d'ailleurs toute une série de meules à grain, entassées dans le vestibule au moment de son abandon. Des observations similaires, réalisées en Asie Mineure sur des maisons-tours environnées de constructions annexes de nature agricole, ont conduit, là aussi, à écarter l'hypothèse militaire.³⁶

Certes, quelques objets trouvés lors des fouilles sont des *militaria* : deux pointes de pilum et quatre glands de fronde en plomb.³⁷ Mais sur une fouille aussi exhaustive, ces indices ne sont pas suffisants pour parler d'un établissement militaire. À côté d'une vaisselle variée

³² Paço & Baçao Leal 1966 ; Gonçalves & Carvalho 2004 ; Alarcão *et al.* 2010.

³³ Paço & Baçao Leal 1966 ; Maia 1978 ; Knapp 1985 ; Fabião 2002 ; Fabião 2006.

³⁴ Wahl 1985 ; Moret 1995 ; Teichner & Peña Cervantes 2010–11, 413.

³⁵ Gonçalves & Carvalho 2004, 70 et 75.

³⁶ Konecny 1994, 315. Plus largement, pour un bilan récent sur l'évolution du débat scientifique en Grèce d'une lecture à dominante militaire et étatique vers des interprétations plus nuancées qui mettent en avant des dynamiques économiques et des initiatives privées, voir Morris & Papadopoulos 2005.

³⁷ Gonçalves & Carvalho 2004, 74.

qui comporte notamment les éléments caractéristiques du service à manger et à boire italique en bronze (broche, *simpulum*, passoire), ces armes faisaient partie de l'équipement normal de la demeure d'un riche propriétaire entouré de serviteurs et de gardes, dans la période éminemment troublée de la fin des guerres civiles. Enfin, les arguments qu'on a voulu tirer de la supposée pauvreté du terroir agricole du Castelo da Lousa ne peuvent être soutenus, face à l'évidence des données de fouille qui témoignent de l'orientation agricole des activités réalisées sur le site.

Cette installation est en somme un parfait exemple d'établissement agricole organisé autour d'une maison-tour. Certes, rien n'interdit de penser qu'une telle bâtisse pût à l'occasion servir de refuge contre des bandes de pillards. Mais cette capacité défensive n'était certainement pas le but premier de l'architecte du Castelo da Lousa ; elle venait par surcroît. D'une certaine façon, les archéologues d'aujourd'hui sont victimes, devant le Castelo da Lousa, de la même erreur d'interprétation que Sénèque devant les villas républicaines de Marius, Pompée et César : « *scies non villas esse, sed castra* ». ³⁸ Toutes proportions gardées, le Castelo da Lousa n'était peut-être pas très différent de ces imposantes maisons à tour que les principales figures des guerres civiles avaient fait bâtir sur les hauteurs du littoral campanien.

Compte tenu de l'isolement du Castelo da Lousa, loin de tout centre urbain, la situation ici décrite est différente de celle que nous avons évoquée plus haut pour la Bétique à propos du site de Torreparedones. La dimension ostentatoire des maisons fortes de la Bétique, soulignée par des appareils en pierre de qualité, ne peut s'expliquer que si leur propriétaire appartenait à l'élite fortunée de l'*oppidum* le plus proche. Le Castelo da Lousa s'inscrit dans un autre contexte, à l'instar des maisons fortes du Bas Alentejo : ³⁹ celui d'une région où le tissu urbain était moins dense, la romanisation moins précoce, et les terroirs agricoles moins attractifs. On peut néanmoins supposer que ces maisons fortes appartenaient à de grands propriétaires terriens : un simple vétéran ou un colon italien sans fortune n'avait pas les moyens de se faire construire un bâtiment du genre des « *castella* » du Bas Alentejo, et encore moins du genre

du Castelo da Lousa. Seuls le pouvaient les membres d'une élite urbaine romanisée (ou des Italiens dotés d'un solide capital), désireux de tirer le profit maximum de leurs terres, même les plus pauvres, en y entretenant en permanence des travailleurs agricoles et/ou des bergers qui étaient logés dans les maisons fortes.

Tours et frontières

Je reviendrai pour terminer sur le dilemme qui oppose, en Espagne et au Portugal, les tenants de l'option défensive/militaire et ceux de l'option agricole/civile. Rappelons tout d'abord que la dimension défensive des maisons fortes est indéniable. L'insécurité était une réalité quotidienne d'une Hispanie marquée par la dure expérience des guerres civiles, et il était naturel que le besoin de se protéger fût une préoccupation majeure des populations rurales (Fig. 6). L'erreur consiste à croire que les tours ont pu être construites à l'initiative d'une autorité politique, dans un cadre militaire, comme éléments d'un plan de défense ou de surveillance du territoire.

Comme l'a montré François Cadiou, en raison de la modicité des moyens dont disposait l'administration provinciale, le système romain d'organisation des territoires hispaniques n'offrait pas la capacité logistique d'entretenir un réseau de tours occupées par des militaires. ⁴⁰ Rome se contentait de maintenir des garnisons dans quelques grands centres urbains. Pour le reste, elle pariait sur l'adhésion des élites locales, leur laissant une grande liberté dans l'administration des cités. Le nombre très limité de soldats dont Rome disposait en Hispanie, une fois terminées les guerres civiles et la conquête, n'aurait jamais pu suffire pour occuper des centaines de « tours » disséminées dans de vastes secteurs de la Bétique et de la Lusitanie. ⁴¹

De plus, les conceptions romaines de l'époque étaient contraires à la notion d'une ligne de défense fixe face aux barbares, du type *limes*, qui en l'occurrence s'avère complètement anachronique. L'idée d'une frontière extérieure séparant deux États territoriaux n'a aucune pertinence dans l'Hispanie de l'époque de la conquête

³⁸ « C. Marius et Cn. Pompeius et Caesar struxerunt quidem villas in regione Baiana, sed illas imposuerunt summis iugis montium : videbatur hoc magis militare, ex edito speculati late longaque subiecta. (...) scies non villas esse, sed castra » : Sen. Ep. 51.11.

³⁹ Maia 1986 ; Teichner & Schierl 2010.

⁴⁰ Cadiou 2008, 279-330.

⁴¹ Cadiou & Moret 2012.

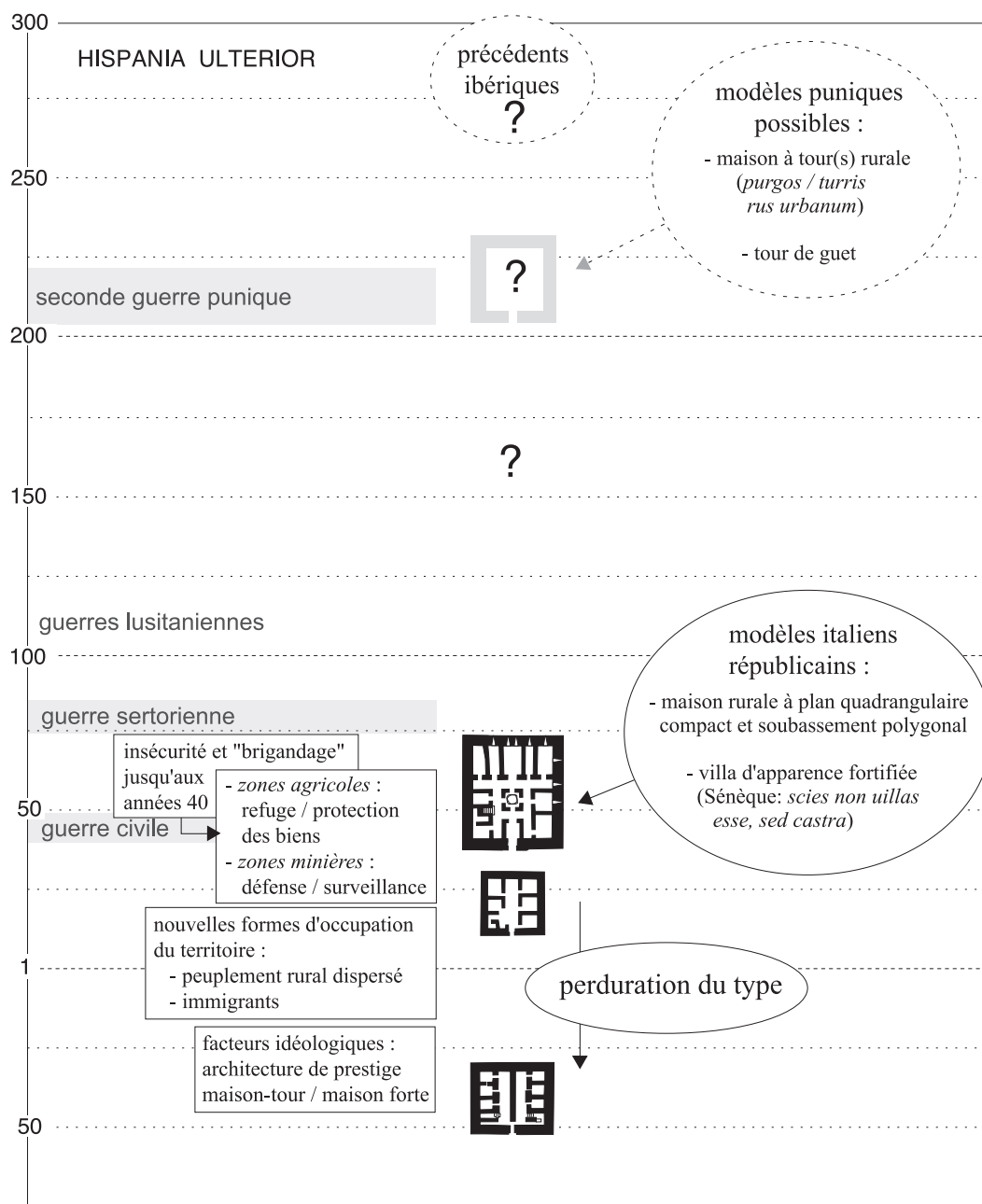


Fig. 6 Schéma d'évolution des maisons fortes de l'Hispanie Ulérieure dans leur contexte historique régional (à gauche) et par rapport à des modèles architecturaux extérieurs (à droite). (D'après Moret 2004, fig. 5.)

romaine.⁴² Jusqu'au début de l'Empire, les Romains ne concevaient pas la province comme un territoire fermé et fini ; leur pouvoir s'exerçait sur des peuples et des communautés, d'un point de vue politique et juridique, plus que sur un territoire considéré dans sa matérialité

spatiale. C'était aux gouverneurs qu'il revenait de définir, année après année, l'espace de leur province en fonction de leurs objectifs militaires. Dans un système qui se révèle ainsi opportuniste, déconcentré et fluide, c'étaient les communautés locales, ou même les propriétaires de

⁴² Isaac 1992² ; Cadiou & Moret 2012.

domaines agricoles, qui devaient prendre en main leur propre sécurité.

Or, ce n'est pas au beau milieu d'un conflit armé qu'un propriétaire est en mesure de bâtir sur ses terres une tour en pierres de tailles : il le fera quand la paix sera revenue, avec le souvenir encore vivace des dangers traversés. Sur ce point la comparaison avec la Grèce, *mutatis mutandis*, peut encore être utile. Il a été remarqué qu'en Attique et dans les îles, la majorité des tours sont construites pendant le IV^e siècle av. J.-C., après la guerre du Péloponnèse, dans des campagnes meurtries par ce conflit et en partie dépeuplées.⁴³ Une transposition directe serait dénuée de sens, mais si l'on place au milieu du I^{er} siècle av. J.-C. l'essor des maisons fortes en Hispanie, on se trouve alors dans un contexte historique post-conflit qui n'est pas sans présenter certains points communs, du moins dans ses effets : des campagnes qui ont souffert, des populations déplacées, une recrudescence des incursions de pillards...⁴⁴ Les populations de l'Hispanie se trouvèrent confrontées pendant une très longue période – probablement plus d'un siècle – à des dangers de basse intensité, constitués non plus par les menaces d'une véritable guerre, mais par des désordres sociaux et par une insécurité endémique. Dans un tel contexte, il était important non seulement de se protéger, mais aussi de montrer à tous, de la façon la plus ostensible qui fût, que l'on avait les moyens de se protéger. Dans les campagnes hispaniques, les tours rurales et les maisons fortes sont l'incarnation éphémère de ce moment historique, bientôt supplantée, au I^{er} siècle ap. J.-C., par le modèle de la *villa*.

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⁴³ Dousougli & Morris 1994, 219.

⁴⁴ Voir Moret 1995, 542, à propos notamment du témoignage de Varron (*Res rusticae* 1.16.2) sur les dangers qu'impliquait la création d'une exploitation agricole près de la Lusitanie.

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SOME PRELIMINARY RESULTS REGARDING THE MITHRIDATIC DEFENCE SYSTEM

Emine Sökmen

Abstract

Historical and archaeological studies of the Middle Black Sea region do not date very far back. Although an increasing number of studies in recent years have provided important data, there is still need for many more research projects in order to reveal the history of the Black Sea region. This paper analyses strongholds that have been identified by travellers, researchers and a small number of surveys, in order to shed light on the administrative and military structure of the Mithridatic Kingdom, which was the single sovereign power in the Middle Black Sea Region during the Hellenistic Period. The strongholds are located on outcrops that dominate the topography, with architectural elements carved into the rock. These strongholds are frequently found within the Mithridatic Kingdom landscape. One of the handicaps of this study is the fact that these strongholds cannot be precisely dated using archaeological data because they are carved out of the natural rock. This study, for now, aims to reveal the relationships between these strongholds within the project area and their relationships with the topography, with the help of visibility analysis. A preliminary result has been produced.

Introduction

The purpose of this paper is to shed light on the fortification system of the Mithridatic Kingdom, the regional power that ruled most of Northern Anatolia during the Hellenistic Period. The paper presents some preliminary results from my Ph.D. research, which analyses the architecture of the strongholds found in the heartland of the Pontic Kingdom and its possible functions. Surveys conducted by the Comana Archaeological Research Project were subjected to the GIS visibility analysis at the stage of the evaluation of identified strongholds.

The study area covers the Mithridatic Kingdom at its widest extent, which was attained during the reign of Mithridates IV. A considerable number of these strongholds have been the focus of previous research, and these have been taken into consideration, but there are no detailed studies for many of them.¹ A holistic approach that would seek to understand all of these strongholds as a system has not been discussed previously. Therefore, my research gathers together the fragmentary evidence regarding these strongholds, puts it into a coherent analytical framework, and combines literary evidence with archaeological data.

¹ Many of them are listed by Von Gall (1967, 511–17). See also Jerphanion 1928, 24–40 and Olshausen & Biller 1984. Travel accounts by Anderson and Cumont also offer many insights about the region.

Practical challenges

There are very few synthetic studies of regional defence systems during Hellenistic times. Currently, the most important academic resource is the work of Olshausen and Biller (1984), with its detailed catalogue of all the publications on the fortresses of northern Anatolia. The only other information sources are 19th-century travellers' accounts and poorly published extensive surveys that did not focus on the period in question. However, recent work on a small part of the Pontic Kingdom near the city of Comana Pontica is beginning to shed light on the settlement pattern.² However, there is still a great deal of missing evidence about the settlement pattern and many of the military units, which are less visible in the territory and less well-known by the locals.

Study area

The western border of the Pontic Region under the Pontic Kingdom was the River Halys, while Armenia Minor constituted its south-eastern border and Cappadocia defined its south-western limits (Fig. 1). Two large mountain ranges, the Pontic and the Taurus Mountains, are the most striking geographical features in the landscape of the region. These mountain ranges are separated by deep valleys. These valleys contain the main historical and contemporary overland trade routes that pass through important Pontic cities and agricultural lands and led to Cilician gates to the south and Northern Mesopotamia to the east.³ The geographical range of the study is based on the borders indicated above. In the first stage of the Ph.D. study, the strongholds to be studied include only those of the province of Tokat.

Historical background

The study of fortifications is an indispensable component of any study of Hellenistic history, since it sheds light on many aspects of the period: economy, politics, military organization and society. Fortifications became more important during the unstable political atmosphere of Alexander's conquests and continued to do so subsequently. Many fortifications were built throughout

Asia Minor at this time, not only in urban settings, but also in rural environments. As the Macedonians were expanding their power throughout Asia Minor, several new kingdoms emerged during this time of political unrest. The Mithridatic Kingdom was the first territorial power to develop in northern Anatolia and the first to build a system of fortifications to control and guard its main centres including the travel and transportation corridors.

The borders of the kingdom varied considerably throughout the two hundred years of its duration. Only during the reign of its last ruler, Mithradates VI (120–63 BC), did the kingdom expand to control most of northern and central Anatolia, as well as the northern and north-western parts of the Black Sea region. The maintenance of Pontic sovereignty in the region, as well as in newly conquered areas, was partially ensured by the construction of strongholds, and their importance increased during the conflict with Rome.⁴

After the emergence of the Mithridatic Kingdom in the inner Black Sea region, defining and protecting its hinterland was a political and economic concern. According to written sources, the Pontic heartland consisted of the cities of Amaseia, which was the political capital between 281 and 180 BC, and religious centres like Comana, Zela and Cabeira. Urbanization in Pontus took the form of small cities and village communities in rural territories, especially near religious centres. The economy of the kingdom relied heavily on agriculture, since it could not sustain itself without the income from the fertile lands (i.e. the cultivated areas such as Dazimonitis, Chiliokomum, Phanaroiea) bestowed by the Iris River. Describing the city of Comana in the Dazimonitis plain, Strabon mentions that it had large fertile fields that belonged to the temple of Ma, and its inhabitants were sacred devotees of the temple. It was also an important market place, generating large amounts of income for the kingdom.⁵

Description of strongholds

All the strongholds established in elevated locations were located at strategic points to protect the road network. They share some common architectural features, such as tunnels with stairways cut through solid rock. They can be found throughout the Pontic region (Fig. 2).

² www.komana.org

³ Wilson 1960, 242.

⁴ Strabon 12.3.28

⁵ Strabon 12.3.34–6

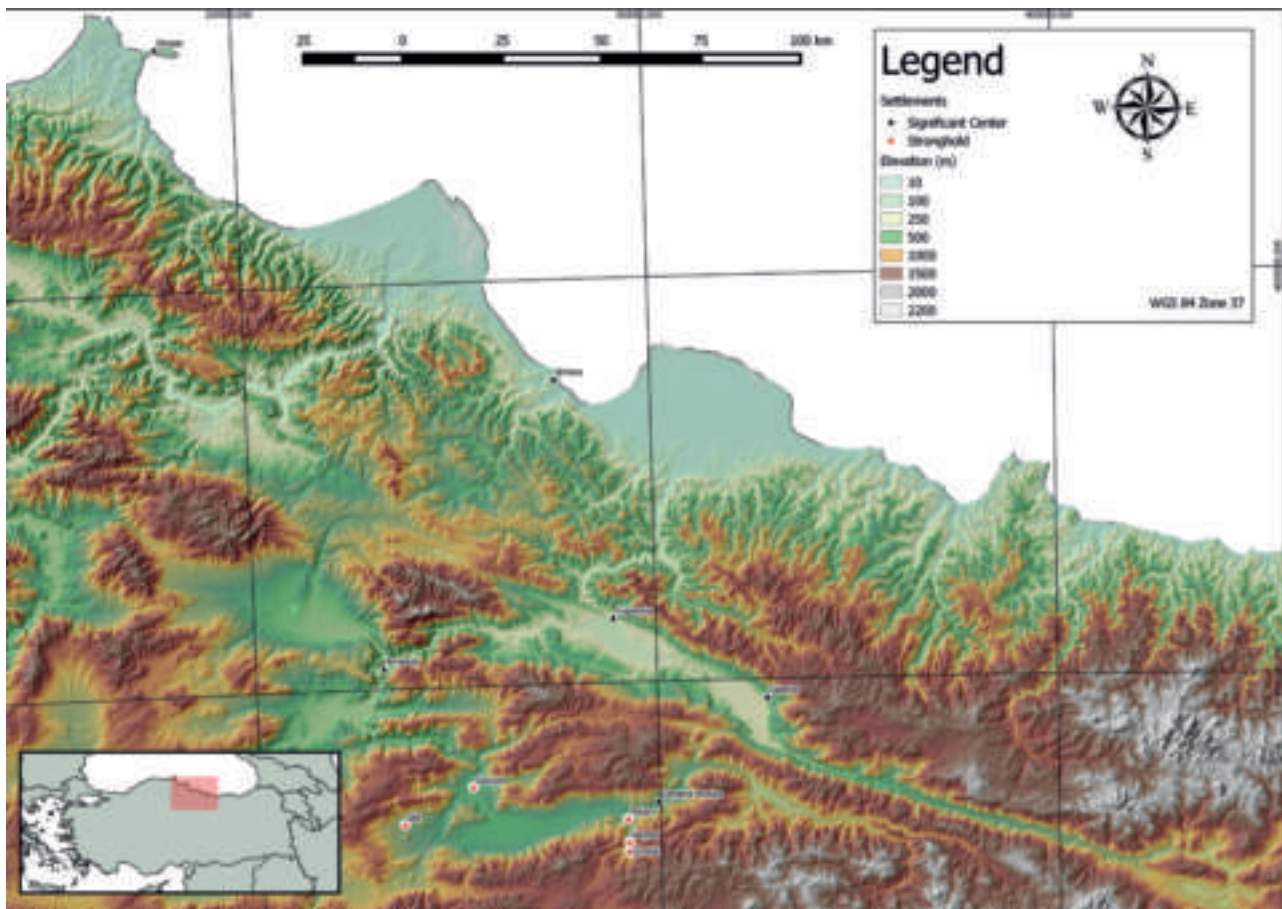


Fig. 1 Map of the Mithradatic kingdom at the north-western part of the Black Sea Region with the main centres (E. Sökmen).



Fig. 2 Stepped tunnel of the Çördük stronghold. Plan of the layout of the stronghold (E. Sökmen).

⁶ These tunnels were cut into the rock to provide safe and secure water supplies for the fortresses within the complex (von Gall 1967, 504–9). Strabon's description of the Amaseia fortress also supports this idea (Strabon 12.3.39). The tunnels were also possibly used as hidden posterns of the fortresses (von der Osten 1927, 134).

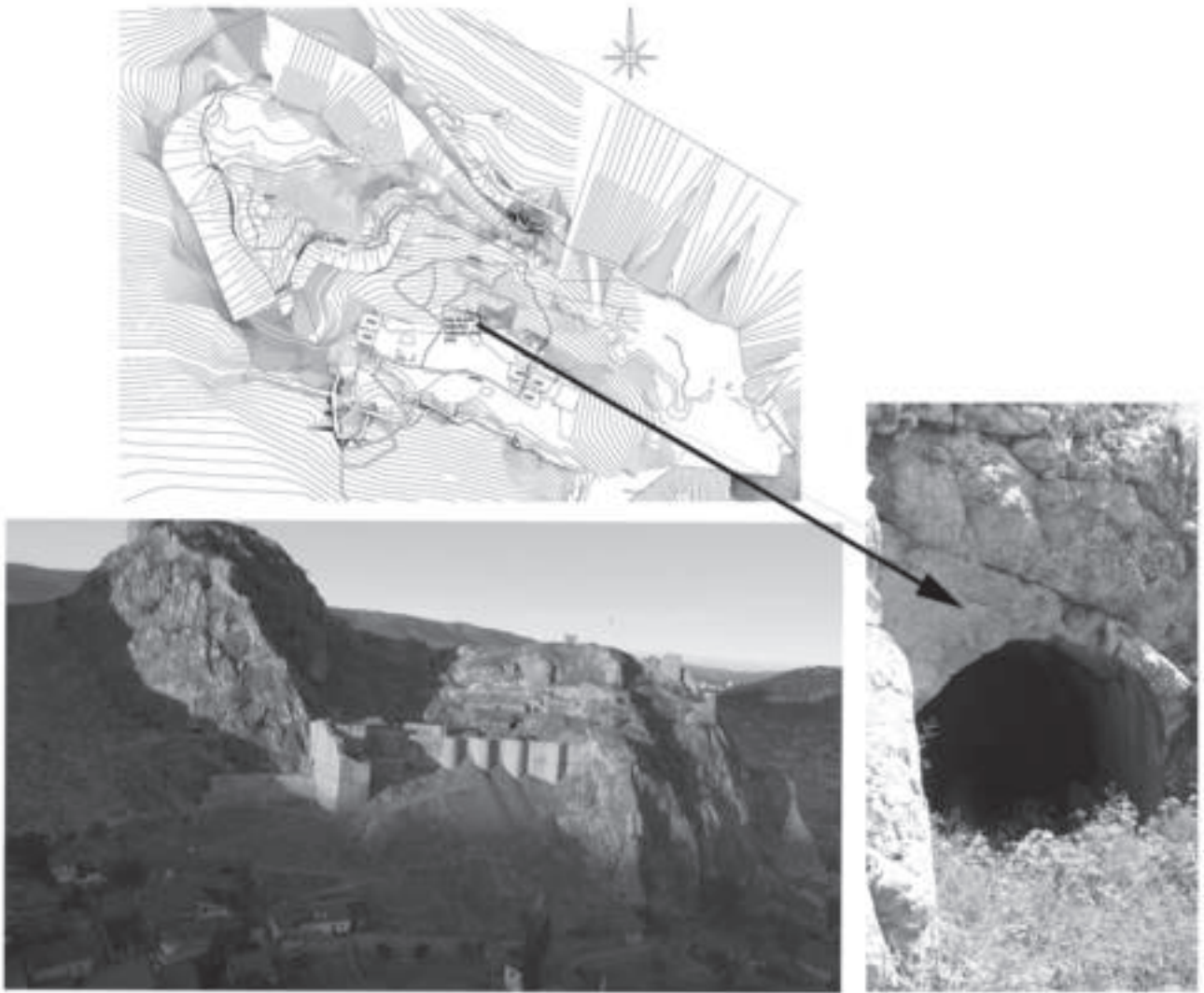


Fig. 3 Plan of the Tokat stronghold. Stepped tunnel (E. Sökmen).



Fig. 4 Stepped tunnel and fortification wall of the Turhal stronghold (author's photo).

Although we do not have accurate information on the purpose of these tunnels, the only information available is the observations and assumptions of the researchers who visited the area first.⁶ These strongholds have no significant buildings, but were structures carved into the rocks. Their walls were reinforced, and they continued to be used long after they were built, in times of political instability during the Byzantine and Ottoman periods. The strongholds of Tokat (Fig. 3), Turhal (Fig. 4) and Çördük (Fig. 2) are good examples of this.⁷

The fortification walls at the strongholds of Çördük and Zela date to the Byzantine and Ottoman periods.⁸ During the most recent study of Çördük, the plan of the fortress began to be drawn in order to better understand it and to provide the basis for comparison with other fortresses in the system. This fortress, located on the north-south axis of the Tokat region and at a point that commands the road to Sebasteia, must have been a very important link in the kingdoms southern defence system.

Geyras is located on top of a cliff north-west of the Tokat-Sivas highway. It is 2.5 km north of the Çördük stronghold. Geyras was not used in subsequent periods due to its high elevation (Fig. 5). It was only used during the Hellenistic period.⁹ Küçükbağlar is located so that it has control over the area where the plain of Dazimonitis begins to widen. The Hellenistic masonry defensive wall was revealed by illegal excavations (Fig. 6). The walls of a vaulted structure and a natural hollow in the rock which was blocked by collapsed rocks can also be seen in this stronghold.¹⁰

Dating

Dating is a problematic part of this study. The limited evidence that has been published concerning strongholds

makes it difficult for us to reach a conclusion on this issue. Two studies that will help us determine the dates of these strongholds have been started in the last few years in Ordu. One concerns the Cingirt Kayası, and the other, the Kurul Kayası. Among the studies that have been conducted in the last two years, the Hellenistic dating of the stronghold at Kurul Kayası has been supported by architectural elements and coin data. Isodomic ashlar masonry, the lamps and coarseware pottery widely found at the site also support this dating.¹¹ Another example is the survey we conducted at Geyras as part of this study. At Geyras where there is no sign of occupation earlier than the Hellenistic period, a recent survey recovered a typical Mithridatic coin from the rubble fill of the tunnel.¹²

Other important evidence comes from Amaseia. According to von Gall, the carving techniques used for the Cilanbolu tunnel at the top of the stronghold and the rock tombs on the façade of the outcrop upon which the stronghold was built are so similar that they must date to the same period.¹³ In 2008, some excavation and cleaning studies were executed by the museum in one of the tunnels in the Amaseia stronghold. It was reported that the tunnel's angle of descent is 35 degrees. It is 250 m deep and a 360-step stairway leads to a water tank at the end of the tunnel. Its function was apparently water storage. It was very generally dated to 301-47 BC by the team.¹⁴

It is possible that the majority of these strongholds in the Pontus were constructed during the same era. Taking into account the substantial labour involved in excavating most of them, their significant number, the general uniformity of their construction and their concentration in a particular region, it does not seem unreasonable to conclude that their construction was only possible through concerted efforts, technical abilities and resources of a large, well-organized state.¹⁵ As stressed by many scholars, the first unified administrative

⁷ Tokat Fxortress is situated on top of a massive rock cliff inside the contemporary city centre. This fortress overlooks the fertile plains of Dazimonitis. Tunnels carved into the rock and several of the blocks used in the fortification wall are characteristic of the Hellenistic period. The fortification walls surrounding the rock cliff were reconstructed and used continuously from the Byzantine period until the Ottoman period. The remains of various buildings can easily be seen on the upper part of the hill.

⁸ Erciyas and Sökmen 2009, 291-3.

⁹ Erciyas and Sökmen 2010, 358.

¹⁰ Erciyas and Sökmen 2010, 357.

¹¹ Personal communication with Prof. Dr. Yücel Şenyurt, the director of the excavation. The results of this excavation have yet to be published.

¹² Erciyas and Sökmen 2010, 359.

¹³ von Gall 1967, 518-19.

¹⁴ Doğanbaş 2010, 69.

¹⁵ These strongholds may have been built after lengthy investigations by a technical staff who knew the region very well.



Fig. 5 Geyras stronghold. Detail of stepped tunnel (author's photo).



Fig. 6 Küçükbağlar stronghold – unearthened wall construction (author's photo).

organization in the Black Sea region was the Mithridatic Kingdom. The construction of strongholds in this region can be attributed to the Mithridatic Kingdom of Pontus during the 3rd to 1st centuries BC.

Viewshed

Fortifications are often a subject of research in landscape archaeology. Their mutual relationship to the surrounding environment and the physical and cultural landscape features are examined. GIS functions offer shortcuts to an analysis of how the landscape was perceived and shaped

by humans. One type of GIS analysis was used in order to analyse the relationship between the strongholds and their environment. Viewshed analysis is a valuable tool because it helps to reconstruct the areas of visibility available from different fortifications at the micro and macro scales. We conducted such a viewshed analysis in our study area. The elevations of the strongholds were increased by five metres to obtain the possible building's height.

The results of this study are as follows:

1. The strongholds were located at points that overlook the road in the fertile Dazimonitis plain.¹⁶ Three

¹⁶ Strabon 12.3.16.

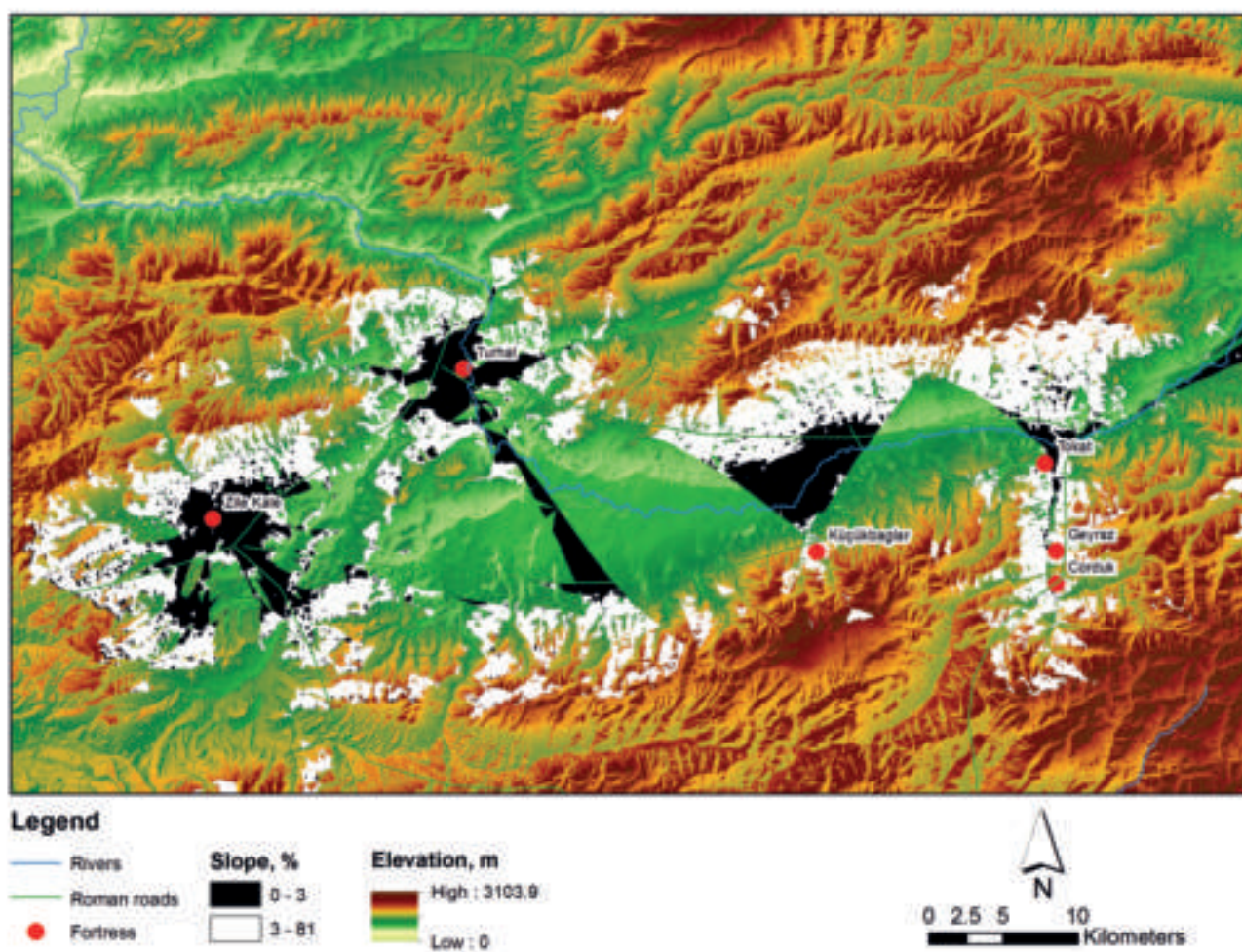


Fig. 7. Visibility coverage of the strongholds studied so far (E. Sökmen).

strongholds are located in the trade route on the north-south axis (Tokat-Geyras-Çördük), and Çördük is located at a point where the valley opens to the plain. Therefore, it seems to have been responsible for the security of the entrance to the Dazimonitis plain (Fig. 7).

2. Geyras is located between Tokat and Çördük. It can be suggested that Çördük has an indirect relation with the Tokat stronghold while Geyras has a direct relation to it. The Tokat stronghold is not visible from the Çördük stronghold. It may be that Geyras was constructed after Çördük to provide a link between Tokat and Çördük. With Tokat Kale, which is mediated by Geyras for Çördük, it can monitor both the road to Sebasteia and the road from Zela to Comana. It may have protected the sacred city of Comana and

its fertile agricultural lands from both directions.

3. The Zela stronghold is located in the western Dazimonitis Plain. It is at the intersection of the roads that come from the Black Sea coast and from Phrygia. It seems to have protected the road passing from the Dazimonitis Plain. It is in a position not only to monitor this road, but also to notice any threat to this plain from the east or west. It is also visible from the Küçükbağlar stronghold.
4. The Turhal stronghold is located on a road heading north-west through the plain. It surveys the Dazimonitis plain, overlooking the road from the Black Sea coast that passes through Amaseia and then leads to Tokat and Comana. Küçükbağlar was built for the same purpose.

Conclusion

Strongholds served as links in a defensive chain that guarded the travel and transportation corridors through the territory, or in the case of conquered territory, they reinforced the hold of the conquerors upon surrounding districts. They also functioned as tools for royal propaganda by convincing people that the kingdom was a real locus of power. Mithridates VI, who conquered Armenia Minor and had a stronghold built here,¹⁷ quickly claimed the newly conquered lands. The stronghold there exemplifies the kingdom's propaganda of power.

Furthermore, as mentioned earlier, considering the fact that the backbone of the economy in the kingdom was the agriculture of rural settlements, it seems fair to suggest that a regional defence network was established to protect settlements and agricultural activity. Fortifications are important because they are a visible expression of the kingdom's dominance. They are demonstrations of the attention given by the kingdom to its countryside, and they create a feeling of safety. They played an important role in eliminating threats that might have been directed against Comana, and it was established in the middle of the wide and fertile Dazimonitis plain. Fortresses can be considered protective measures built to defend the sacred and fertile lands of Comana.

This preliminary study indicates that other links must have been in communication. Signalling stations¹⁸ must have existed in order to completely cover the plain in terms of defence and access.

A detailed architectural study of the strongholds is currently under way which aims to provide an understanding of the function of individual architectural features (i.e. tunnels, defensive devices), subsequent reconstruction phases, sizes (their capacity for soldiers), possible functions and architectural similarities with different sites.

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¹⁷ Strabon 12.3.28.

¹⁸ The signalling stations located between these strongholds may be considered another element of the defence system. During the survey studies, one was found 2 km north-east of Comana, which is now called Maltepe. This signalling station is located near the ridges of Karakaya and is also in a position to protect the road network from Zela to Comana. In terms of the remains, this unit can be dated back to the Byzantine period and therefore is not evaluated here.

CITY WALLS AS REGIONAL AND IMPERIAL STRATEGY? THE CASE OF SOUTH LANGUEDOC*

Douglas Underwood

Abstract

Late Antiquity was a period of significant investment in urban defences in the western half of the Roman Empire. Three cities – Narbonne, Carcassonne and Toulouse – in south Languedoc, the south portion of the province of Narbonensis I, were fortified in this period. This study examines the evidence for these city walls, looking at their curtains, towers, gates and chronology. This overview will highlight the notable amount of material and chronological dissimilarities between the three walls. In spite of being in a single province, and in proximity to each other on a key transport route between the Mediterranean and the Atlantic, they have almost nothing in common. This suggests that there was no overarching region- or province-wide construction programme for south Languedoc, but that each of the three cities organized its own construction, using resources and adapting plans to the local situation. Such a view leads to the question of why these walls were built, if they were not part of any overarching scheme. This study will therefore explore the walls of Narbonne, Carcassonne and Toulouse in the light of several common explanations for Late Antique walls, and conclude that the localization of fortification can be seen as a part of a new decentralized approach to defence. Further, it will find that necessity of city walls for these three cities can be seen as a part of a broader shift in Late Antique urbanism, where fortifications became an indispensable element in the definition of a city's status.

One of the most perceptible changes between the Roman and medieval worlds is the built environment of the cities. And within the urban landscape, perhaps the most striking transformation is the installation of circuit walls, which had been absent for most of the West throughout much of the early Empire.¹ This notable increase in the construction and repair of urban fortifications across the West occurred between the late 3rd and 5th centuries CE.²

City walls are crucial for understanding late Roman urbanism and the state of the Empire in this period. Much of the earliest scholarship on these urban defences argued that walls were hastily constructed

* This paper draws in large part from research carried out for an M.A. thesis at the University of Missouri. I would like to thank my supervisor there, Dr Marcus Rautman, for the feedback and support on that project. Significant portions of this research were carried out in person during a week-long research trip to Narbonne, Carcassonne and Toulouse in 2007. Any observations and measurements not otherwise attributed were collected during these site visits by the author. I would like to thank the anonymous reviewer for the helpful suggestions, especially on the most up-to-date studies for these walls that appeared after my initial research. Further thanks are due to the organizers of the Fokus Fortifikation conference generally, but especially S. Müth, for further assistance on the preparation of this paper.

¹ The best studies on early walls are: Congrès archéologique de Gaule méridionale 1987; Rodríguez Colmenero & Rodà de Llanza 2007.

² The most comprehensive source for Late Antique walls is Johnson 1983a.

responses to various Germanic invasions.³ Modern scholarship has moved toward a more nuanced view of these fortifications and it is now generally accepted that the rapid investment of resources, after a period of economic and political turmoil in the 3rd century, actually attests to a measure of economic and urban viability.⁴ In these ways, as enormous urban monuments built with defence in mind, occasionally composed of re-used stone, Late Antique city defences are indicative of the complex reality and changing priorities of the period.

Roman fortifications in Gaul

There were numerous pre-Roman Iron Age fortifications across Gaul. These showed considerable diversity in size, and were either constructed in earth and wood or stone, depending on the region, period and type of settlement.⁵ There is very little evidence for urban defences at Roman sites during the later Republic, yet a number of colonies in Narbonensis were fortified in the Augustan or early Imperial period: Arles, Nîmes, Narbonne, Béziers, Aix-en-Provence, Fréjus, Orange, Vienne and Toulouse.⁶ Beyond these nine, only two cities in the other three Gallic provinces were fortified in the same period.⁷ The construction of fortifications in Gaul after the 1st century CE largely ceased until the mid-3rd century.⁸ Yet from that point until the 6th century, a large number of walls were constructed across Gaul.⁹ Many of these Late Antique city walls have been the subjects of good archaeological studies in the past twenty years.¹⁰

Taking advantage of this expanded knowledge, this study will examine the archaeological evidence for a small set of fortifications from a closely-defined region in order to properly reconstruct their features, construction method and dating. The south portion of the Diocletianic province of Narbonensis I, roughly the modern south Languedoc region, encompasses the area between the

Massif Central and the Pyrenees along the Aude River. A key Roman road in south Gaul, the Via Aquitania, traversed the Aude valley from Béziers to Bordeaux, providing a route for the transport of goods from the Atlantic to the Mediterranean.¹¹ Along this road were the sizeable Roman cities of Narbonne, Carcassonne and Toulouse, which currently lie in the modern departments of Aude and Haute-Garonne, about 145 km apart (Fig. 1). All three were points along the trade route, which Strabon (4.1.6) noted



Fig. 1 Southern Gaul (illustration: author with permission from Eric Gaba).

³ i.e. Wheeler 1926, 191. For a broader summary of previously held views on the economics of the 3rd century, see Galliou 1981, 259–61.

⁴ Loseby 2006, 76; Bachrach 2010, 60–1.

⁵ Woolf 1998, 109–10.

⁶ Goodman 2007, 103.

⁷ Autun and possibly Lyon (Goodman 2007, 103).

⁸ There were several late 1st- and 2nd-century circuits built in the north of Gaul, like Grand, Tongres and Trier (Esmonde Cleary 2003, 76). Beyond this region, there were a number of similarly dated walls in Africa (Deroche & Leclant 2012) and Britain (Wacher 1998).

⁹ Maurin (1992, 384–8) argues for two main phases of construction in Gaul: one in the late 3rd century and then one in the early to mid-5th century. However, given the obvious lack of chronological evidence for these walls, except Saint-Bertrand (Esmonde-Cleary 2013, 133), it is difficult to fully accept this phasing, much less apply it beyond the confines of Aquitania.

¹⁰ As noted, the standard work for Late Antique fortification is Johnson (1983a), although it is beginning to feel a bit outdated. For more contemporary studies on Bordeaux, Dax, Périgueux and Bazas, see Garmy and Maurin 1996. Or on the well-excavated circuit at Saint-Bertrand-de-Comminges, see Wood 2002, Wood 2006 or especially Esmonde Cleary and Wood 2006.

¹¹ The first comprehensive study on the road is Griffe 1938. Goudineau (1996, 480) and Sanchez (2002, 84) have more recently discussed it.

relied on the Aude before continuing overland across the Narouze gap to the Garonne and which remained an important way to move goods from the early Imperial to Late Antique periods.¹² More importantly these cities were the three most significant walled settlements in Narbonensis I.¹³ Together they provide the opportunity to explore some features of Late Antique fortification in south Gaul. They also facilitate an exploration of several common explanations for Late Antique walls, thereby shedding light on changing conceptions of security and urbanism in this period.

Masonry and construction

There are at present two sections of Roman wall readily visible in modern Narbonne, at the Archbishop's Palace and at the Post Office building, with another seven sites where the wall has been discovered in the past.¹⁴ The available evidence suggests an irregular pentagon-shaped stone fortification of about 1600 m in total length, covering an area of about 17 ha (Fig. 2).¹⁵ The walls at Narbonne were built in *opus quadratum*, or *grand appareil*,



Fig. 2 Plan of Roman walls of Narbonne (illustration: author; map: Google).

¹² Esmonde Cleary 2013, 317–18.

¹³ On the walls in Narbonensis I generally: Heijmans 2006, 61–2. Béziers, relatively near to Narbonne, was also fortified, likely in the 3rd century, and would be a good candidate for inclusion in this study. However, the evidence for the wall, and research on it, has been quite limited, which accounts for its exclusion from this short study. For an up-to-date summary of the evidence, see: Heijmans 2006, 61–4. Nîmes, also in Narbonensis I, was fortified in the Augustan period, and seems to have only minor alterations in Late Antiquity (Heijmans 2006, 61).

¹⁴ Moulis 2002, 140–7.

¹⁵ Ibid, 140.



Fig. 3 Roman walls of Narbonne with spolia (author's photo).

and employ much spolia (Fig. 3).¹⁶ The use of large, squared stones as facing was common in late Roman wall construction, especially in regions where good stone is available locally.¹⁷ The known sections of the wall vary in thickness from 1.0 to 3.68 m.¹⁸ The overall height of the curtain is unknown, but based on one standing section and an account concerning the construction of the Cathedral, it was over 4 m.¹⁹ The depth of the foundations of the wall has not been discovered.²⁰

The Roman wall of Carcassonne runs a kidney-shaped course of 1070 m and encloses an area of just over 7 ha.²¹ There are 21 distinct sections of *petit appareil* masonry, the facing of the Roman wall, mixed with various other styles of repair and reconstruction stonework (Fig. 4). The heaviest concentration of ancient work is in the north-east, but nearly every section of the walls except a small portion in the south-west has some *petit appareil*, indicating that the original wall followed roughly the current course. There is, however, evidence that the Roman wall deviated from the current line in a short

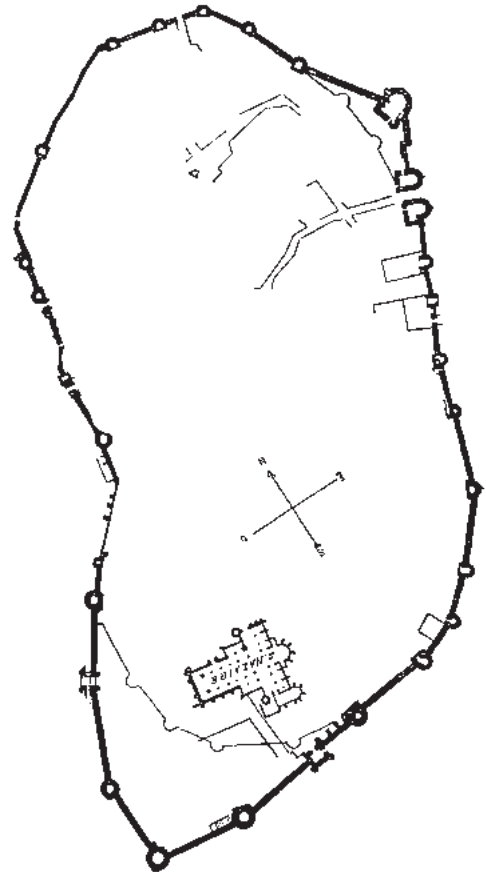


Fig. 4 Plan of Roman walls of Carcassonne (from Viollet-le-Duc, *La cité de Carcassonne (Aude)* 1866).

¹⁶ The standing wall at the Archbishop's Palace contains a few blocks with carved decorative elements. The Musée Lapidaire contains a large number of stones taken from points where the wall was deconstructed in the last two centuries and almost all of these have inscriptions that point to previous use.

¹⁷ Johnson 1983a, 35.

¹⁸ Gayraud 1981, 287. These measurements, from literary sources, do not indicate whether this was the original thickness or if the wall had been damaged in any way.

¹⁹ Ibid.

²⁰ Grenier (1959, 86) has suggested them to be 4–6 m deep, which is likely overestimated.

²¹ The Roman wall of Carcassonne was repaired many times in the Middle Ages, before being significantly reconstructed in the 13th century, when an outer circuit wall was added. Both the inner, largely Roman wall and the medieval outer wall were heavily reconstructed in the 19th century by Viollet-le-Duc (see Viollet-le-Duc 1866 for his own account). For a more modern history of these works, see Poisson 1994 or Amiel *et al.* 2000.



Fig. 5 Wall and tower of Carcassonne (author's photo).

section in the north-east.²² The foundations of the wall are composed of 1 m of rubble and concrete (Fig. 5). Set directly on this concrete mass is one footing course of large ashlar stones about 0.5 m high and 1 m wide. The wall is overall between 2.2 and 3.8 m thick.²³

The earliest wall around Toulouse, built at the time of Tiberius, ran a semi-circular course, ending on the

Garonne River in the north and south.²⁴ A second phase was added to close off the riverside left open by the early wall. This likely covered the whole of the riverside, but no traces have been found near the northern terminus.²⁵ There are a handful of wall sites near the southern end of the early fortification (Fig. 6), and two of those have significant stretches *in situ*, including a 71 metre-long expanse at the Catholic Institute that is in remarkable

²² Clearly visible remains of an older tower connected to the rear of the Tour du Moulin du Connétable prompted excavations in the 1970s, which revealed a 0.25 m tall stretch of the curtain wall nearby (Braund 1982, 32). This wall is thought to have run between the Tour du Trésau and the Tour du Moulin du Connétable, several metres behind the 13th-century wall.

²³ Guilaine & Fabre 1984, 37.

²⁴ Darles 2007.

²⁵ Bacrabère & Badie 1996, 125.



Fig. 6 Plan of Roman walls of Toulouse (illustration: author; map: Google).

preservation.²⁶ The construction of the late Roman wall at Toulouse, entirely in brick (Fig. 7), differs from that of the early wall, which features several metres of *opus vittatum mixtum* (*petit appareil*) in a lower section topped with *opus testaceum*.²⁷ The foundations of the late wall are 1 m deep on the northern section of the Catholic Institute and 2 m deep at the southern, and 1.26 m deep

at another site.²⁸ The foundation at one section in the southern part of the wall is made exclusively of bricks set together with mortar.²⁹ Elsewhere the foundation consists of a few large stones, some ceramics (bricks and tiles), and a large amount of spolia mixed into a concrete mass.³⁰ There are three brick courses that serve as a levelling course above the foundation. The wall itself

²⁶ Baccrabère 1974.

²⁷ de Filippo 1993, 193.

²⁸ Baccrabère & Badie 1996, 127.

²⁹ Baccrabère (1974, 14) attributes this disparity to different teams of workers handling different sections of the wall and that this spot may have been particularly wet with seepage from the river which would require working exclusively with bricks.

³⁰ Baccrabère (1974) catalogues the spolia, which seem to have come from several funerary structures, and notes that none of the elements can be dated more generally than 1st or 2nd century.



Fig. 7 Late Roman walls of Toulouse (author's photo).

consists of two parallel brick faces, measuring 0.58 and 0.59 m thick, cut through with transversal walls to form 2 m wide compartments for a concrete and rubble fill.³¹ At the base, the wall is between 2.36 and 2.38 m thick.³² The original height of the wall is unknown. The tallest section currently preserved is 3.9 m high.³³

Towers and gates

Five towers have been discovered at Narbonne.³⁴ The two best-preserved examples are both semi-circular projections 9 m in diameter and 32 m apart, built in the same masonry as the circuit.³⁵ These towers extended through the wall, but did not project behind it and were flat-backed (Fig. 8). Similar towers would have run around the entire circuit, likely even along the riverside wall, at a comparable spacing to the surviving towers, roughly 30–35 m apart.³⁶ This would mean 45–50 towers for the whole wall. There is a lack of evidence for any gate structures, although the city must have had at least two, one at each end of the Via Domitia on the north and south end of the city.³⁷ It is possible that there would have been at least two more, at the east and west ends of the *decumanus maximus*, but no traces of these have been found.

There are at present 25 towers along the inner circuit wall of Carcassonne, 23 along the wall itself and two flanking the medieval castle.³⁸ Twenty-one of these are at least partially Roman, or on the original foundation.³⁹ There would have been, based on generally accepted calculations, between 34 and 38 towers on the original circuit, depending on how the major gates were flanked.⁴⁰ The standing towers are spaced between 18 and 35 m apart.⁴¹ They are similar in size and construction, faced in *petit appareil* with brick courses (*opus vittatum mixtum*) (Fig. 5). The towers are U-shaped, projecting on both sides of the wall and have three identical windows spaced evenly along the front.⁴² They measure 5–6 m front-to-back, and 3.5–5 m across and the projecting fronts sit on polygonal socles.⁴³ The overall height of the towers is uncertain, but the highest standing ancient tower measures 9 m tall.⁴⁴ There is one current gateway that stands on the site of a

³¹ Baccrabère 1974, 11–12.

³² One section of the wall is only 1.75 m thick, but Baccrabère & Badie (1996, 127) suggest that this was altered when this wall was incorporated into a foundry during the French Revolution.

³³ Baccrabère and Badie 1996, 127.

³⁴ Moulis 2002, 140–7.

³⁵ Ibid, 142.

³⁶ Moulis (2002, 146), argues that there were towers along the riverside wall from the surviving Grand Escalier tower, which stands at the corner of the riverfront section, and a text from 1356 which calls for the reinforcing of a now-lost tower that was adjacent to the quays.

³⁷ Ibid, 140. The south gate would have led out to the river and a bridge over the Aude. As only small portions of the Roman quays have been found (Moulis 2002, 146), it is unclear if there was a river gate in the walls on the south side in addition.

³⁸ Poux 1922, 36.

³⁹ Guilaine & Fabre (1984, 36), unhelpfully, say there are 'une vingtaine' original towers.

⁴⁰ Guilaine & Fabre 1984, 37.

⁴¹ Ibid.

⁴² Poux 1922, 42.

⁴³ Fourdrin 2009, 108–9.

⁴⁴ Ibid, 41. See also Fourdrin 2009, 108–9.



Fig. 8 Tower of Narbonne walls (author's photo).

Roman gate, although there were possibly four originally.⁴⁵ Two smaller posterns survive as well.⁴⁶

No towers have been found in connection with the late wall at Toulouse, but 13 contreforts have been discovered (Fig. 7).⁴⁷ The Tiberian wall has a mixture of round, U-shaped and polygonal towers.⁴⁸ The square contreforts on the inside of the late riverside wall were put in place as extra structural support against external attackers and possibly as a small platform for defences.⁴⁹ They are spaced 3 m apart and measure 0.9 m per side.⁵⁰ No river gates have been found for this wall. One postern

has been discovered at the Catholic Institute, and there were likely several more.⁵¹ This opening was 6.86 m wide *extra muros*, sloping back to 2.88 m on the inside between two contreforts.⁵²

Chronology

There is little evidence for the date of the fortifications at Narbonne. The wall was once thought to have been constructed in the years just before the Visigothic settlement in south Gaul in the early 5th century.⁵³ It is now believed to date around the last quarter of the 3rd century, based largely on two discoveries.⁵⁴ The first is two coins, a small bronze of Gallienus and a slightly larger bronze of Maximian, apparently found within the wall in 1870. The discovery was reported to the Archaeological Commission of Narbonne, but the report does not provide any information about the find spot.⁵⁵ Accepting these coins as tentative evidence gives a *terminus post quem* of 260 CE for the Gallienus coin and 288 CE for that of Maximian.⁵⁶ More conclusions are impossible without the details about the location of the discovery. The second find is an inscription on a re-used block from the wall, dedicated to Philip the Arab (244–9 CE) from the residents of Béziers.⁵⁷ Again, no information is recorded regarding the find-spot or context of the block. Still, this inscription reinforces the dating of the coins and suggests that the wall was built after the middle of the 3rd century. Sidonius Apollinaris mentions walls that were half ruined in the 'veteris duelli', the old war, in a letter from 465 CE (*Epist.* 23.37–47), providing a reasonable *terminus ante quem*. Together, this circumstantial evidence suggests a late 3rd- to 4th-century date for the walls of Narbonne.

The inner circuit wall at Carcassonne is an impressive mélange of nearly 17 centuries of construction, reconstruction and repair. There is some literary evidence for the date of their original construction, as

⁴⁵ Ibid, 38.

⁴⁶ Ibid.

⁴⁷ Baccrabère & Badie 1996, 128.

⁴⁸ de Filippo 1993, 200.

⁴⁹ Baccrabère 1974, 9.

⁵⁰ Baccrabère & Badie 1996, 128.

⁵¹ Baccrabère 1974, 15–18.

⁵² Ibid.

⁵³ Thiers 1891, 168.

⁵⁴ Moulis 2002, 147.

⁵⁵ Commission Archéologique de Narbonne 1944, 268–70.

⁵⁶ Grenier 1959, 87; Moulis 2002, 147.

⁵⁷ CIL XII 4227.

the walls were mentioned by Gregory of Tours (*Hist.* 8.30, 8.45 and 9.31). The Hierosolymitan itinerary of 333 describes the city as a *castellum*, which seems to connote a walled fortress of some kind.⁵⁸ The ring of walls circling the high outcropping of the Roman town would have easily resembled a fortress. However, excavations in 1995 revealed ceramics that have been dated to no earlier than 375 in a construction fill of the wall.⁵⁹ At the same time, archaeomagnetic tests were undertaken on two sets of bricks, showing that they were not made in the 2nd or 4th century.⁶⁰ This suggests that the bricks were from the 3rd or 5th century. Theoretically, either date is acceptable, although a 3rd-century date would indicate that the bricks were re-used in the wall, as the pottery evidence points to a post-4th-century date.

At Toulouse, the spolia in the late wall, none of which has been given anything beyond a vague 1st- or 2nd-century date, may indicate a *terminus post quem* of the 2nd century.⁶¹ An archaeomagnetic investigation of a large sample of bricks returned two dates, 190 and 275 CE.⁶² The investigator noted a curious fact that both dates, and even a date between the two, are possibilities for when these bricks were made.⁶³ However, Badie has recently suggested, based on the same tests, that the bricks were more likely from the middle of the 1st century.⁶⁴ He also argues, from the damage to the non-exposed edges of the bricks, that they were cut down, implying re-use.⁶⁵ As a result, the mid-1st century must be taken as only a *terminus post quem*, but the wall likely dates from the 2nd century at the earliest, if the spolia are any indication.⁶⁶

Overall, none of the chronologies for these fortifications are perfect. For Narbonne, a rough *terminus post* and a *terminus ante quem* of 288 and 465, respectively, are all

that is currently possible. The situation at Carcassonne is somewhat better, having both excavation and scientific research, which shows the date to be some time after 375, and possibly before 500 if the bricks were not re-used. At Toulouse, the only absolutely solid date is a *terminus post quem* of the mid-1st century, although the spolia and other comparisons suggest a date from the 2nd century or later.

Categorization

Having explored the physical characteristics and chronology of the walls, we must turn to their context and significance. In past scholarship on urban fortifications, there have been several attempts to categorize walls across Gaul in order to compare them. The earliest studies grouped them chronologically, linking urban defences and Germanic invasions, and therefore labelling nearly all walls in Gaul as late 3rd- or early 4th-century structures, no matter how much or little evidence was available for such a conclusion.⁶⁷ Archaeological and scientific inquiries in the past 20 years have greatly improved the chronology of Late Antique circuits, and so these strict chronological groupings have been largely abandoned.⁶⁸ That is not to say that the importance of chronology as a tool for classifying walls has been diminished, but that a priori dating schemes have largely been left aside.⁶⁹ Unfortunately, very little can be said about the dating of the circuits of this study. The only circuit with two solid end dates, Narbonne, could still have been built at any point over a century and a half. There is not enough direct evidence to say anything about their chronological context and whether these walls were built in the same period or not.

⁵⁸ Chevallier 1976, 37.

⁵⁹ Fourdrin 2002, 311; Fourdrin 2009, 114.

⁶⁰ Ibid.

⁶¹ Above note 30.

⁶² Baccrabère 1974, 20.

⁶³ Baccrabère (1974, 21) records the results of the archaeomagnetic tests in a letter from Professor E. Thellier, which says: 'Il se produit ce fait curieux, nous sommes près d'un maximum qui à mon point de vue, n'est pas encore bien défini, mais il se révèle avec deux branches à très forte pente. Cela nous donnerait deux dates 190 et 275 avec la possibilité d'une date entre les deux si le maximum était moins élevé qu'il n'est sur la courbe où encore un fois, il demeure un certain doute.'

⁶⁴ Badie 2002, 566.

⁶⁵ Ibid, 564.

⁶⁶ Badie (2002, 568) recognizes the problems in assigning a solid date, but suggests from comparisons to other walls that it might have been as early as the 2nd century.

⁶⁷ I.e. Blanchet 1907; Demougeot, 1969.

⁶⁸ For good overviews of this work, see in particular, Souilhac 1996 and Heijmans 2006. Some, like Maurin (1992), have dismissed a universal 3rd-century date associated with Germanic invasions, but now see a number of walls as early 5th century, in response to Visigothic movements.

⁶⁹ I.e. Maurin 1992, 384–8. See above, note 9.

Urban fortifications have also been grouped together for their similar characteristics, either for their construction method, thickness or number and types of towers.⁷⁰ These groupings are often used to extrapolate chronology, which is often problematic.⁷¹ Even within broad categorizations, like wall facing or type and number of towers, it is impossible to find two similar walls, as there are many details that vary widely, even among outwardly similar structures. For the walls of south Languedoc, there is very little in terms of physical similarities to link the walls together, even taking into account the strategic differences between building a new wall and enclosing an open riverfront. They all, significantly, employ spolia – in the foundation at Toulouse and Carcassonne and in the superstructure at Narbonne. Still, the differences between these three neighbouring walls are more striking. They are not similarly sized, as Narbonne was 1.7 km around and enclosed 17 ha and Carcassonne 1.07 km and 7 ha. Toulouse is different and the late walls only extended the early walls to cover the riverside, the whole course of which would have then run to nearly 3.8 km, and enclosed 90 ha.⁷² These three cities are different also in terms of towers. Narbonne had semi-circular towers that are 9 m in diameter and Carcassonne had U-shaped towers that are 5–6 m across. Toulouse had a number of contreforts, but no known towers in the late wall section. This is different from the riverside wall of Narbonne, which did have towers. Construction methods in these three cities differ as well. All employed a concrete core with some regular facing but ranged in thickness from 1 m to 3.68 m. Carcassonne had small *petit appareil* blocks for part of the facing with occasional brick courses, and at Toulouse the wall above the foundations was an entirely brick-faced construction.

Overall, these three city walls exhibit a notable number of dissimilarities for such a small geographical region with important trade and transportation links. They were also the three major walled cities in the province of Narbonensis I. While their chronology is not fully resolved, the physical characteristics of the walls were distinctly different. This heterogeneity rather suggests an absence of an overarching region- or province-wide, centrally planned fortification programme for the major cities of the province.⁷³ Such a programme, which would have been undertaken by a roving band of imperial architects or army engineers, would likely have meant some similarities between these walls, either in thickness, or even gates and towers, as is seen at fortifications in north Gaul.⁷⁴

Analysis

The apparent lack of a building programme for these major city walls in Narbonensis I raises the question of why they were built in the first place – whether for defence, prestige or something else. In order to answer that question, some background is necessary on the previously proposed explanations for Late Antique city walls. The period between the mid-3rd and 5th centuries was one of significant investment in urban defences throughout the western Empire. In Italy, Gaul and Spain, there was a first wave of wall construction from the second half of the 3rd to the early 4th centuries, which continued at a slower pace from the later 4th into the 5th century.⁷⁵ Fortifications were quite rare in North Africa until the 4th and early 5th centuries.⁷⁶ These

⁷⁰ Johnson 1983a, 111–12; Butler 1961, 44.

⁷¹ As Loseby (2006, 77) notes, this practice risks circularity by dating less-known walls from better dated ones.

⁷² The large area covered within the final version of the walls is interesting in contrast to the noted model of the *enceinte réduites* (see Butler 1961; Johnson 1983a, 82–115), where Late Antique walls covered a much-reduced urban space. For example, at Autun (Johnson 1983a, 84) only a small corner of the original Augustan wall was kept. And at Toulouse, it seems that the full extent of the area within the walls was not occupied until the 4th or 5th century (de Filippo 1993, 191). The fact that Toulouse kept and expanded its earlier circuit suggests that there was a deliberate decision to use a large, existing fortification, in contrast to the newly built smaller walls elsewhere.

⁷³ It may be possible to hypothesize that there was no broader programme of fortification for the whole region, since there is no archaeological or textual indication of any military installations or forts in south Languedoc. There may have been a small hill-fort at Les Cluses near the Spanish border, but it seems that it was only used as a customs tax collection station (Cleere 2001, 93). There is only one textual reference to a *castrum* in Narbonensis I, at Uzès (*Not. Gall.* 15). Some evidence has been found of a military camp somewhat outside the region studied here, the *castrum Bigorra*, at Saint-Lézer in Aquitania (Wood 2009). Beyond this, there has been little research done on the possibility of small fortified settlements in south Gaul, in contrast to the north (see overview in Esmonde Cleary 2013, ch. 2), so nothing further can be said conclusively.

⁷⁴ Johnson (1983a, ch. 2) highlights the thick, high walls, external towers and small gateways in particular.

⁷⁵ On Italy: Christie 2006, 319–24; on Spain: Kulikowski 2004, 101–8; on Gaul: Heijmans 2006.

⁷⁶ Sears 2007, 84–5.

Late Antique walls across the West show considerable diversity in scale, design, appearance and chronology.⁷⁷ Nevertheless, the trend of increasing ubiquity of urban defences in the West after the 3rd century indicates a marked transformation in the Roman Empire. One standard model that has been frequently used to explain this change is a generalized militarization of Roman society, a breakdown of the *Pax Romana* stemming from internal political conflicts and the movement of peoples beyond the frontier into Roman territory.⁷⁸ There is no reason to abandon this model outright; in fact, a good case has recently been made for the intermixing of military and civilian lifestyles in northern Gaul.⁷⁹

However, the explanation of an increasingly militarized society does not fully account for the history of urban defences in Narbonensis I. First, there is no direct evidence for any military involvement in the construction of these walls. Second, there is no established relationship between the army and these city walls. The evidence regarding army stations in Gaul comes largely from the *Notitia Dignitatum* (*Not. Dig.*, *Occ.* 42.16–24), which records a *praefectus classis* at Chalon-sur-Saône, Vienne, Arles, Marseille and a unit of soldiers at Bayonne.⁸⁰ The *Notitia Galliarum* (*Not. Gall.* 15) lists one *castrum* in the province of Narbonensis I, at Uzès.⁸¹ So while there were troops in some parts of Gaul, it appears that there were none in south Languedoc, leaving open the question of who manned the city walls at Narbonne, Carcassonne and Toulouse.⁸² Because of these problems connecting walls and the military, Late Antique city walls do not *ipso facto* prove a more militarized Late Antique province. City walls are not exclusively military structures, but rather

stand at an intersection between an urban monument and a military installation.⁸³

There has more recently been a trend to understand some fortifications for their strategic utility, as part of a central imperial policy of defence.⁸⁴ In some ways, this way of looking at walls is reminiscent of the earliest studies that saw city walls as a direct response to a particular historical event, even if these recent studies do tend to acknowledge longer-term defensive trends. Attempts have been made especially to establish strategic groups of fortifications in Spain, North Gaul and the eastern Alps.⁸⁵ The arguments for something approaching a coherent system of defence in the north of Gaul or the eastern Alps cannot be disputed, with such a significant number of specifically military installations. It should be noted, however, that the role of urban defences in these systems is not always clear, and might be more of an ad hoc response to an already increased military presence.⁸⁶

Further, there are problems with applying this strategic grouping to the non-frontier regions like Spain.⁸⁷ There is no reason to turn to this sort of strategic explanation for the walls in Narbonensis I either. The characteristics of the three are quite distinct enough, and there is no direct evidence for any imperial or army involvement with the walls. That does not mean that there was no strategy for urban defence, however. New developments in fortifications were beginning to emerge in the 3rd and 4th centuries, with an organic shift to deal with new kinds of threats in Late Antiquity, where peoples and armies were frequently moving within the western provinces, and the imperial government became more

⁷⁷ Johnson 1983a, ch. 5.

⁷⁸ Christie 2006, 283; Ward-Perkins 1984, 191.

⁷⁹ Esmonde Cleary 2013, 60–96.

⁸⁰ These were all fortified in Late Antiquity except Marseille (Johnson 1983a, 81–94).

⁸¹ Harries 1978, 42.

⁸² Bachrach (2000, 197), following Luttwak (1976) mentions mobile detachments, which is not unreasonable. However, there is simply not enough evidence on this problem to come to any conclusions.

⁸³ While Esmonde Cleary (2007, 161–3) suggests walls were constructed for reasons of civic pride, I am more inclined to agree with Loseby (2006, 77), who argues that there are elements of both fortification and decoration, and that the relative importance of the two factors varied from case to case. Dey (2010, 5–6) also recognizes both aspects to Late Antique city walls.

⁸⁴ Army construction: Fernández-Ochoa and Morillo 2005, 331; Maurin 1992, 383. Central planning: Butler 1961, 47; Johnson 1983a, 114.

⁸⁵ On Spain, Fernández-Ochoa and Morillo 2005; Fernández-Ochoa *et al.* 2011. On northern Gaul, Brulet 1990. On the eastern Alps: Christie 1991.

⁸⁶ Esmonde Cleary 2013, 89.

⁸⁷ Fernández-Ochoa and Morillo (2005) argue for a 3rd-century plan for the fortification of the route of the *annona* out of Spain, which travelled along up from the south and across the north edge of the Iberian Peninsula. However, this idea is problematic for three reasons. First, they argue that mobile forces manned these fortified cities, yet, there is no good evidence for these types of troops in Spain before the 5th-century *Notitia Dignitatum*. Second, such a large project of fortification, carried out for the *annona*, seems unlikely in light of the ceramic evidence from the Rhine, Britain and, to a degree, Gaul, where Spanish oil imports were in decline from the 3rd century onwards (Reynolds 2009). Finally, there is no evidence, epigraphic or otherwise, to directly connect any wall circuit to imperial patronage, or to any central administration, which should be expected for a project to protect imperial supplies.

and more unstable. It was not quite the centrally planned defence-in-depth strategy, as suggested by Luttwak, but a natural, decentralized and distributed responsibility that was interpreted and carried on a local level when the imperial *limites* broke down.⁸⁸

This all suggests that, while there may elsewhere have been some coordination among cities and the imperial administration, city walls in south Languedoc should best be seen as local projects. This idea differs from that of some scholars, who argue that the central administration was necessary to build walls for legal, financial and technical reasons.⁸⁹ The legal codes clearly support the idea of imperial permission to build a wall, especially *Digest* 1.8.9.4 and 50.10.6. In terms of financing, wall construction was a massive and expensive project.⁹⁰ The inscription praising Diocletian and Maximian – imperial benefactors – for building the walls of Grenoble is frequently cited in this regard.⁹¹ However, beyond this, there are relatively few surviving building inscriptions for walls throughout the western Empire in Late Antiquity, and most of these come from Italy, largely during the time of the Ostrogothic king Theodoric. While perhaps not the closest parallel for Gaul, they do at least indicate a mix of local and imperial/regal benefactions for walls. Still, Johnson argues that it would have been impossible for the state to fund more than a few fortification projects, and those cities who had their walls paid for were ‘doubtless the lucky ones’.⁹² For the walls of Narbonensis I, nothing precise is known about their financing. It would be quite revealing to know the exact sources of funding for these walls, whether from the city itself, local elites, provincial governors or even imperial funds. In terms of technological assistance, the issue of the extent of army involvement in the engineering aspects of Roman fortifications is not yet resolved, but good arguments have been made that military assistance was not always necessary.⁹³ For the walls of this study, the disparities seem to suggest that three different parties built them. But even if the engineers were from the

army, this makes little difference for the question if the initiative, funding and materials for the projects were local.⁹⁴ So while there was some imperial patronage for walls, and they theoretically needed imperial permission to be built, a largely local project of fortifications remains possible. Such a local endeavour seems likely for the city walls in south Languedoc.

Conclusions

A close examination of the Late Antique walls of Narbonne, Carcassonne and Toulouse reveals three distinct fortifications – perhaps in terms of chronology, but certainly in form and fabric. These differences, at three cities within a single province, and along a well-trafficked trade route, seem to indicate that there was likely no overarching plan for fortifying all major cities in the region. Instead, these walls perhaps rather hint at a shift within Narbonensis I to a new strategy based on individual city undertakings. Such trends are not, however, strictly confined to south Languedoc. As others have noted, city walls were a public monument that drew mostly local funding in a period of time when other public building was gradually declining.⁹⁵ City walls in the non-frontier regions during the imperial period were often an added luxury, or a status symbol, given to colonies and other cities of rank.⁹⁶ In Late Antiquity, they became a more widespread element of urbanism, encircling a wider range of cities, and frequently smaller and less ornate than earlier circuits.⁹⁷ This is a clear development of the conception of defence in the late Roman Empire. But more importantly, it can also be seen as a change in the very conception of urbanism, a shift from the Imperial to Late Antique city. In the same way that a forum became a necessary element of any Roman city in the Republican period, fortifications moved from signs of high status reserved for a few in the Imperial period to an integral part of cityhood in Late Antiquity.⁹⁸ Gregory of Tours once wrote of Dijon,

⁸⁸ Luttwak 1976, ch. 3.

⁸⁹ Johnson 1983b, 69; Loseby 2006, 76; Bachrach 2010, 42.

⁹⁰ Bachrach 2010, 63–4.

⁹¹ *CIL* XII 2229.

⁹² Johnson 1983b, 69.

⁹³ See Pearson 2003, 73–4.

⁹⁴ Bachrach 2010, 41–2.

⁹⁵ Loseby 2006, 76. Kulikowski 2004, 108.

⁹⁶ Goudineau 1980, 244–61; Johnson 1983a, 11; Esmonde Cleary 2003, 77–8.

⁹⁷ However, this is not always the case. There are a number of walls in north Gaul that are patterned on the exterior face, suggesting something far beyond simple functionality. See Guilleux 2000; Dey 2010.

⁹⁸ This of course ignores the ways in which other (e.g. Greek or medieval) fortifications were related to other forms of urbanism. The comparison at hand is intentionally limited to the Imperial and Late Antique periods, in western regions away from the frontiers.

with its strong walls, towers and gates, asking 'Why this place is not called a *civitas* I do not know' (*Hist.* 10.3.19). In his estimation, the city is a place with those features. It is within this context, where walls were becoming a critical public monument, that we should also interpret the walls of Narbonne, Carcassonne and Toulouse.

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CLAUSTRA ALPIUM IULIARUM: A LATE ANTIQUE DEFENSIVE SYSTEM IN THE NORTHERN ADRIATIC AND EASTERN ALPS

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Abstract

One of the most impressive fortification systems in south-eastern Europe was erected in late antiquity in the territory of present day Croatia and Slovenia. It stretched from the Adriatic Sea at Rijeka in Croatia to the peaks of the Julian Alps in Slovenia. It was built to protect *Italia* from barbarian incursions from the direction of the Pannonian plain and Dalmatia. The *Claustra Alpium Iuliarum*, as it is mentioned in several historical documents, consisted of stone walls built at strategic points, in valleys, at mountain passes and so on. Strategic positions were defended by a series of *speculae*, small fortlets and *castra*.

The initial idea of building the system was considered following the period of *Pax Romana*, in the mid-2nd century, motivated by invasions into the territory of the Roman Empire by the Quadi and Marcomanni. A special defence system, the *Praetentura Italiae*, was created with that objective and was intended to close off the most vulnerable access roads to Italy through the eastern Alps.

In the 3rd century, when the Empire was threatened again, the older *Praetentura* defence system was restored by means of the construction of a firm defensive system of walls with camps and permanent garrisons known by the name of *Claustra Alpium Iuliarum*.

In this period, probably as a result of the influx of numerous soldiers stationed in the town, Tarsatica – as the only town and the only harbour within the system – was developing rapidly. The construction was not limited to the monumental *Principia* – several other public buildings were also erected, including a public bath, and the town walls were renewed. But all of this could not prevent the destruction of the town in the late 4th or early 5th century when the *Claustra* was also abandoned.

The system was built to defend *Italia* from barbarian incursions, but it appears to have been used more for battles between various pretenders to the imperial throne, and less for its original purpose.

Following a period of intensive conquest and an extended period of peace (*Pax Romana*) the core of the Roman Empire, *Italia*, was for a long time secure from the destructive effects of war. When the situation began to change in the late Roman period and when various barbarian peoples began to make incursions over the frontiers of the Empire, *Italia* itself was threatened. Given the direction of the barbarian incursions, the greatest threat was from the north – Italy's only land border. A natural barrier to incursions into the Apennine peninsula along this northern frontier was the massif of the Alps. Given the cited danger the period saw a great deal of consideration given to the defence of Italy, and construction was launched on various segments of a bulwark that aimed to close off the most vulnerable Alpine passes. The most exposed passes towards Italy were in the eastern or Julian Alps and the northern Adriatic, and this region, therefore, became a vital military zone in which a separate defensive system was created known as the *Claustra Alpium Iuliarum* (Fig. 1).

Data on Roman period fortifications appear very early in various scientific works and travelogues. They are mentioned in the 16th century by Andrea Rapicio, and we find individual topographic data related to the *Claustra* from the 17th to 19th centuries. Pietro Kandler and Peter Hitzinger undertook the first serious study of the system in the 19th century. They were the first to comprehend the integral nature of the system from Rijeka to Ajdovščina, and it was Hitzinger who first associated them with the late Roman period.¹

A series of archaeological and conservation operations were conducted in the 20th century that we shall not enumerate here in light of the nature of this paper. We shall cite only the most significant research conducted during the 1950s and 1960s. An international project was launched at the time with the aim of collecting written and archaeological data that resulted in the, to date, most comprehensive work related to this defensive system – *Claustra Alpium Iuliarum I*.² The project was initiated by Slovenian archaeologists, joined in the effort by experts from Croatia, Italy and Austria.³ We should also note the

research conducted over recent years by the Croatian Conservation Institute in the city of Rijeka,⁴ i.e. the Roman period Tarsatica, the results of which form the groundwork for this paper.

Historical data

We find data on the use of Alpine passes with the aim of defending Italy in the period that precedes the creation of the *Claustra Alpium Iuliarum* system. Thus, for example, P. Cornelius Tacitus (*Tac. Ann.* 1.20.1 sqq) provides information on the turmoil provoked in AD 14 by *manipuli* stationed in *Nauportus*, which was the *castra* of legionary detachments responsible for maintaining and regulating traffic along an important segment of the Italian north-eastern trunk road.⁵ The same author also cites the *praesidia* that were stationed in the 'Pannonian Alps' (*Tac. Hist.* 2.98.3.) in AD 69 during the conflict between Vespasian and Vitellius. *Praesidia* were above all mobile defensive units with special tasks,⁶ who in this concrete case were likely defending the eastern Alpine passes, in particular the key passes: *Emona–Aquileia* and *Tarsatica–Tergeste*.

Historical data from the second half of the 2nd century mention the incursions of the Marcomanni and Quadi through the Julian Alps at which there was, judging from the cited sources, a level of organized defence (*Amm. Marc.* 29.6.1; *SHA Marc.* 14.5.). We find data on the organization of this defence on a base with an inscription in honour of Quintus Antistius Adventus in Thibilis, Numidia not long after AD 170.⁷ The base, among other things, reads that Q. Antistius Adventus was *legatus Augusti ad praetenturam Italiae et Alpium expeditione Germanica*. A *praetentura* was a military-administrative zone adapted to the particular conditions of the Marcomanni wars, established around the Illyrian–Italian passes.⁸

The importance of the eastern Alpine passes in the defence of northern Italy is also emphasized in the available data on what are referred to as the *Bellum*

¹ Hitzinger 1854; Šašel & Petru 1971, 51; Bitelli 1999, 33.

² Šašel & Petru 1971.

³ The following experts participated: J. Šašel, P. Petru, M. Urleb, R. Matejčić, F. Leben, W. Modrijan, H. Dolenz, G. Brusin and S. Rutteri.

⁴ Bekić & Radić-Štivić 2009; Višnjić & Radić-Štivić in print.

⁵ Šašel & Petru 1971, 22.

⁶ Šašel & Petru 1971, 21.

⁷ *AE* 1893, 88; *ILS* 8977.

⁸ *AE* 1893, 88; Degraasi 1954; Šašel 1974.

Aquileiense around AD 238 (Hdn. 8.1.1.). The mention of barriers in the Julian Alps suggests that there was at the time at least a partially constructed defensive system.⁹

Chronologically, the next piece of information concerns the brother of Emperor Claudius II, M. Aurelius Claudius Quintillus, who administered the eastern Alpine defences in AD 269 and 270.¹⁰

During the 4th century news of the eastern Alpine defensive system is increasingly frequent. When Vetrano abdicated in 350, the war between Magnentius and Constantius II became inevitable and Magnentius' troops fortified their positions in the Alpine zone. In September 352 Constantius succeeded in penetrating through the Alps, capturing the central fortification at Ad Pirum and the chief command at Aquileia.¹¹

From the words and writing of St Ambrose we learn of the dangers that threatened northern Italy during the incursions of the Sarmati and Quadi in the second half of the 4th century. Thus, in his eulogy to his half-brother Satyrus, written in 375, he mentions the thin border in the Julian Alps that separates them from their enemies (Sanctus Ambrosius 1.31.). When emperor Caesar Flavius Valentinianus Augustus was killed while preparing to move from Vienna to Italy to counter the Sarmati and Quadi threat, St Ambrose wrote his eulogy. It too mentions the construction of the Alpine fortifications.¹²

In a letter to Emperor Theodosius, St Ambrose cites his victory over Magnus Maximus in 388 in the area of the military frontier zone of the eastern Alps and also mentions the previous barbarian incursions through the Alps (Sanctus Ambrosius 40.22). The events of 388 are also cited by other authors, who describe the broader context (Oros. 7.35.1; Zos. 4.46.2; Paulus Diaconus PL 95, 939). All of the authors emphasize the importance of the eastern Alpine zone, the abandonment of which in the end cost Emperor Maximus the war.

The most often cited event related to the *Claustra* occurred in 394. We find data on this event in as many as seventeen

historical documents.¹³ After the suicide of the twenty-year-old Valentinian II in Vienna in 392 Senator Arbogast saw to it that Eugenius be proclaimed the new emperor. Theodosius did not recognize him and thus forced, in the spring of 393, his invasion of Italy. The battle between the two pretenders to the imperial throne took place on 5 and 6 September 394 at the Frigidus River. Although his troops were outnumbered and the terrain was unfavourable for Theodosius, he unexpectedly won the battle.

Other important information originates from the 5th century pertaining to the area of the *Claustra Alpium Iuliarum* system. In 452 the Huns, led by Attila, entered Italy, and Prosper Tiro (MGH AA IX, 482) cites that commander Aetius failed to use the Alpine barrier, at which he could have halted his enemies.

The most significant document, however, in which we find data on the *Claustra* in the 5th century, is the *Notitia Dignitatum*. In this official document of the Roman Empire from the early 5th century, detailing the administrative and military organization of the Empire, cited through appointments and titles, we find the area referred to as the *Tractus Italiae circa Alpes* (Not. Dig. occ. XXIV). The Tractus was under the command of the *comes rei militaris Italiae*, who was subordinate to the chief commander, the *magister militum praesentalis*. The *comes* divided the entire Alpine zone, also referred to as the *limes*, into sectors, including the Julian Alps sector. Active in these zones were the *legiones Iuliae Alpine I, II, III*.¹⁴ After this we do not find mention of the *Claustra Alpium Iuliarum* system.

We find information on the existence of these ramparts in a medieval document issued by Hungarian King Bela IV whereby he in 1260, as a sign of his gratitude to the aristocratic family of Frankopan for their exceptional efforts during the Tartar incursion of 1242, granted them ownership of the Vinodol region. The document precisely describes the western frontier of this province citing a wall (*murus*) in two places at sites where we can find them to the present day.¹⁵ From the 14th century we have data on the ramparts from Venetian writer Andrea Dandolo. Writing of the Avar incursion of the 6th century he notes

⁹ Šašel & Petru 1971, 24.

¹⁰ SHA *Aurel.* 37.5–6; Šašel & Petru 1971, 32, 33.

¹¹ Flavius Claudius Iulianus, *Panegyric in Honour of Constantius* 1.28., 1.31., 1.32., 3.7., 3.17., 3.18; Šašel & Petru 1971, 24–6.

¹² Šašel & Petru 1971, 21.

¹³ Sanctus Ambrosius PL 16, 1386; Turranius Rufinus 11.33; Oros. 7.35.13; Sanctus Aurelius Augustinus 5.26; Philostorgius 11.2; Socrates Scholasticus PG LXVII p. 652 B; Zos. 4.58.1; Theodoretus 5.24.4; Sozom. hist. eccl. 7.22.6; Theodorus Anagnoster MGH AA IX p. 651; Cassiod. 9.45.9; Johhanes Antiochenus *FHG* IV, 608, br. 187; Theophanes Confessor, abbas Agri PG 108, 208; Nicephorus Callistus Xantopulos 12.39).

¹⁴ Šašel & Petru 1971 35.

¹⁵ Smičiklas CD V, 685. The document is most likely a forgery from the 1430s (Klaić 1959, 46), which in no way lessens the value of the data as it relates to our subject.

that they ‘came to the long walls that began at the city of Tarsia to the border of Istria’.¹⁶ We can connect this report with a very high level of certainty to the southern sector of the *Claustra*.

Archaeological remains of the defensive structure outside of Croatia

The *Claustra Alpium Iuliarum* is a system of fortifications and defensive stone walls with towers at the chief roads

that lead into Italy from the provinces of Noricum, Pannonia and Dalmatia. The remains of the *Claustra* defensive structure stretch for the most part through present day Croatia and Slovenia, with smaller segments of the ramparts appearing in present day Italy and Austria. In Croatia the core of the defensive structure was linked to the port city of Tarsatica,¹⁷ home to the military command of the southern sector of this defensive system. We find another smaller segment of the defensive walls in the area of the settlement of Prezid. This segment closed the natural pass that led from the east towards another key line of communication: the Emona–Aquileia road.



Fig. 1 Geographical map with confirmed structures of the *Claustra* system (Josip Višnjić).

¹⁶ Suić 1970, 713.

¹⁷ The present day city of Rijeka.

The majority of the defensive structure in Slovenia was concentrated precisely on the defence of this important line of communication.¹⁸ The road ran, via Emona, Nauportus, Ad Pirum and Castra towards Aquileia. The width of the defensive line at this trunk road was 50 kilometres. The first defensive line was at Vrhnika, the second at Logatec and the third at Hrušica (Ad Pirum), which was the centre of this defence group. Between these main defence structures were an entire range of small rampart sections shutting off all passes through which a large group of people could penetrate from Illyria into Italy.¹⁹

Besides the chief line of defence, a number of other segments of the ramparts and late Roman fortifications appear in Slovenia and Italy that can be brought into connection with the *claustra* system.²⁰ The segments of the ramparts range from several hundred metres to almost 2 km in length. Traces of the accompanying towers have been registered on some of them. All of

these segments controlled more or less important roads that provided passage from the east to northern Italy.

Archaeological remains of the defensive structures in Croatia

The majority of archaeologically confirmed structures of the *Claustra* system in present day Croatia are related to the defence of the important traffic route that led, via Tarsatica and Tergeste, to Aquileia (Fig. 2). The chief point of the defence and the seat of the military command of this southern sector was Roman Tarsatica.

Tarsatica became a *municipium* in the 1st century and in the 3rd century the city was incorporated into the *Claustra Alpium Iuliarum* system.²¹ Tarsatica was likely incorporated into the system as a vital military site,



Fig. 2 *Claustra* structures in present day Croatia (Josip Višnjić).

¹⁸ Given the character of this paper and the fact that colleagues from neighbouring countries are conducting the research, we shall only provide a summary overview of the key data pertaining to the parts of the *Claustra Alpium Iuliarum* in neighbouring countries.

¹⁹ Šašel & Petru 1971; Leben 1962–4; Ulbert 1981; Urleb 1962.

²⁰ The sites on which the ramparts appear are: Benete, Gradišće, Selo pri Robu, Rakitna, Nova Oselica, Zarakovec, Rattendorf, Tarvisio and San Pietro al Natisone. Late Roman castles were also identified at the Nadleški Hrib and Sv. Marijeta sites (Šašel & Petru 1971).

²¹ Bekić 2009, 220–1.

both because of its exceptional strategic position on the route of one of the chief roads leading from the east into northern Italy and because of its port, the easiest way to supply the army with foodstuffs and weaponry.²²

The watershed moment in the development of the city was the construction of the *Principia* complex, a military command headquarters in the frame of the *Claustra* system. Judging by the finds discovered during research conducted in 2007, we can date its construction to the period from 260 to 270.²³

While this is a time of great instability for the Roman Empire, one in which strong Barbarian pressure is felt on all frontiers, it is for Tarsatica the beginning of the most prosperous period in its history. This is also the period of the most intensive construction of public buildings in the city. Besides the already mentioned construction of the military command,²⁴ this period is marked by the construction of monumental new public baths²⁵ and city ramparts (Fig. 3).²⁶



Fig. 3 A map of Rijeka with the indicated presumed orientation of the Roman period walls and the position of the *Principia* (Josip Višnjić).

²² Višnjić 2009a, 30.

²³ Bekić 2009, 221.

²⁴ Višnjić 2009b.

²⁵ Matejčić 1968, 23–31; Novak 1995a, 414–15; Blečić 2001, 91–2; Čataj in print.

²⁶ Gigante 1925, 3–18; Gigante 1944, 7–9; Faber & Matejčić 1969, 317–18; Matejčić 1969, 3; Matejčić 1970, 2; Matejčić 1982, 18; Matejčić 1988b, 62; Novak 1995b, 390; Blečić 2001, 80; Višnjić in print.

THE TAR SATICA PRINCIPIA

A military command was situated at the core of Roman Tarsatica, researched in 2007 by the Croatian Conservation Institute. The research covered all of the available *Principia* area not situated under existing buildings or communication routes. The total researched area covers 488m², i.e. about one quarter of the total area of the complex.²⁷

Some of the structural elements that belonged to the Tarsatica *Principia* were known of prior to the archaeological research carried out in 2007. This pertains above all to a still well preserved Roman arch in Stara vrata Street, once the entrance to the complex (Fig. 4).

Remains of Roman period architecture emerged from the ruins of buildings after World War II. Several other sections of the *Principia* have been located during smaller



Fig. 4 Roman arch – the monumental entrance to the area of the *Principia* (author's photo).

scale archaeological and conservation work carried out in the past thirty years, such as parts of the north-western section of the complex, the walls of which were used during the construction of medieval structures.²⁸

Based on the data collected through this research, and from previous research conducted in the *Principia* area, we can approximately reconstruct its appearance. The central paved yard, 20.6 m by 17.8 metres in size, was surrounded on all sides by buildings. To the south side, with a monumental entrance to the *Principia*, the yard was closed by a series of rooms, 8.74 m wide. The elevated lateral sides had four rooms each. To the north the yard was bordered by a basilica that occupied its entire width, while the space between the basilica and the lateral rooms was closed off by a partition somewhat recessed in relation to the façade of the basilica. The façade was most likely articulated by a series of columns on which the gable rested. The elevated plateau on which the basilica was situated was approached by a set of steps in the axis of the main entrance. The rooms in the back of the complex were somewhat recessed in relation to the basilica. They took up the entire breadth of the *Principia*, and there were likely five – two to each side of a central room (Figs 5–7).²⁹

The floor plan of the complex was 45 by 45 metres big. The perimeter and partition walls of the *Principia* were built in the *opus mixtum* technique. Based on the uncovered small archaeological finds we can date the construction of the *Principia* to about the mid-3rd century, while its violent destruction can be dated to the late 4th or very early 5th century.

THE TAR SATICA CITY WALLS

The walls built at the time bear witness to the character of the time and the city as it functioned. The walls of Roman Tarsatica have been identified at several locations during the archaeological research conducted in the 20th century, which has allowed us to determine the perimeter of the Roman period city (Fig. 8).

Individual researched segments of the ramparts were built with two parallel walls set 7 m apart. The inner wall had a thickness of 1.8 m, while the outer wall was 2 m thick. Perpendicular walls were discovered connecting them creating a coffered reinforcement. The

²⁷ Višnjić 2009b, 35–66.

²⁸ Suić 1976, 102; Suić 1996, 477; Matejčić 1988a, 15; Novak 1995b, 395; Novak 1980; Novak 1995a; Pantlik 2004.

²⁹ Višnjić 2009b, 60, 61.



Fig. 5 A view of the utility rooms of the *Principia* along the western perimeter wall (author's photo).

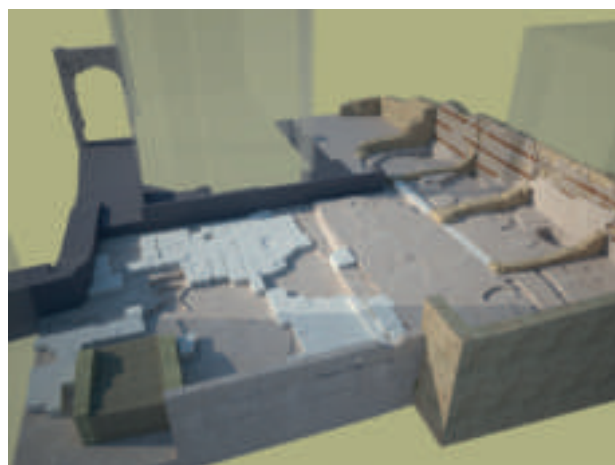


Fig. 6 A model of the researched area of the Tarsatica *Principia* (Ivana Kleva, Josip Višnjić).

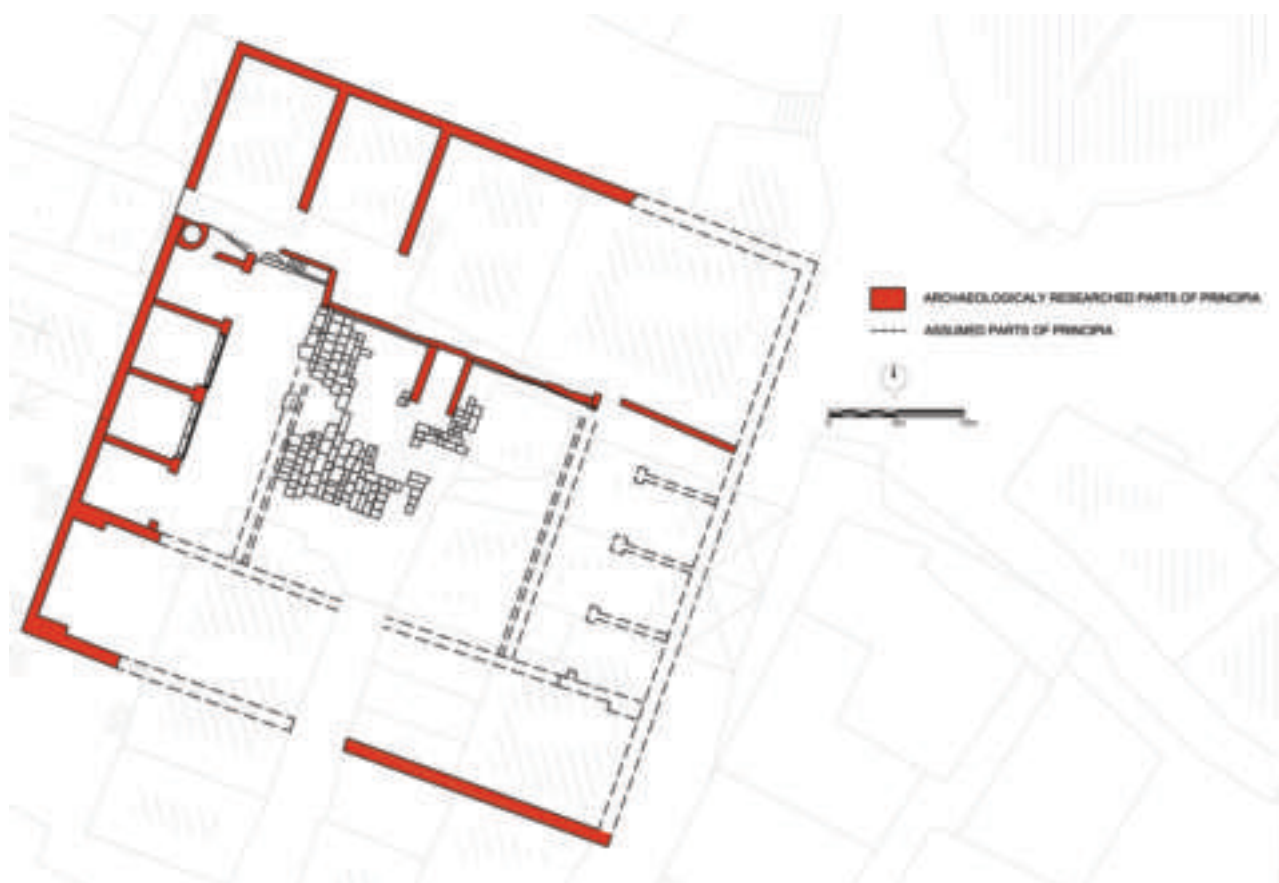


Fig. 7 The assumed cross-section of *Principia* (Tim von Leliwa, Valentina Višnjić, Josip Višnjić).



Fig. 8 Remains of the *Clastra* in the city of Rijeka (author's photo).

area between these walls was backfilled with earth and numerous fragments of tegulae, amphorae, oil lamps and other ceramic vessels. Based on coins found in the connective mortar of the walls they have been dated to the 4th century.³⁰ Other researched segments of the wall were 2–2.35 m wide and built such that their faces were constructed of regularly laid stone blocks, while the space between them was filled with stone and sherds of amphorae and tegulae.³¹

THE REMAINS OF THE TARSATICA SEGMENT OF THE *CLAUSTRA*

Roman Tarsatica was situated on the western shore of the Rječina River estuary, which extends to the sea from the north through a deep canyon. This natural barrier was to a significant extent used in the *Claustra* defensive system. We can follow the start of the defensive wall practically from the ramparts of the Roman city heading north. At this section it followed the edge of the canyon, coming to the very cliffs of its highest elevation in the locality of Sveta Katarina. Presently the wall is only partially preserved as a result of intensive construction work in

the 19th and 20th centuries that largely destroyed the remains of the Roman ramparts. Graphic depictions of Rijeka in the 17th and 18th centuries³² are, thus, of great interest to us as they show and indicate the still preserved remnants of these structures. The ramparts are 1.8 m thick at these sections, and have been preserved to a height of 2.8 metres and we can follow a length of 526 m over three sections. From there traces of it are lost, and it is very likely that they were in fact never built here given the natural configuration of the terrain that could be very well used in defensive purposes. The river canyon is very steep here and reaches a height of over 100 m in places, and it appears that there was no need to construct artificial barriers. The exception to this are the passes through the natural ramparts, but traces of possible segments of the Roman ramparts at positions such as these were certainly destroyed during the construction of post-medieval roads. Segments of the ramparts in the city of Rijeka itself and in its immediate vicinity were researched and conserved in the period between the two World Wars, but unfortunately also partially destroyed by the urbanization of the wider area in the period following World War II.³³

³⁰ Gigante 1925, 3–18; Matejčić 1969, 1–3; Matejčić 1982, 17; Matejčić 1988b, 61; Blečić 2001, 82. It is somewhat unusual, and in fact almost unbelievable, that the ramparts were not constructed prior to, or at least during the time of the construction of the *Principia*. Considering that the research of the ramparts was conducted several decades ago, the available documentation and finds do not allow for a precise dating. It is certainly possible that these were finds that indicated subsequent *reinforcements* of the ramparts.

³¹ Matejčić 1970, 2; Matejčić 1988b, 62; Novak 1995a, 414; Blečić 2001, 83–4.

³² We find these depictions in a graphic in the 1689 work of J.W. Valvasor *Die Ehre dess Herzogthums Crain* and in a panorama of Rijeka from 1726.

³³ Valvasor 1689, IV 98; Klaić 1901, 173; Depoli 1925, 25; Degrassi 1954, 133; Šašel & Petru 1971, 55.



Fig. 9 A section of the *Claustra* above Grobnik Field with visible buttresses (author's photo).

THE CLAUSTRA SEGMENT AT GROBNIČKO POLJE (JELENJE SECTOR)

The ramparts of the *Claustra* can again be followed on the opposite bank of the Rječina River, on the area above Grobničko Polje (Grobnik Field) (Fig. 9). This segment prevented possible penetration behind the lines of the Rijeka ramparts, which gave access to the chief road towards Tergeste and Aquileia, and penetration towards the Mlaka valley that leads to present day Ilirska Bistrica in Slovenia, where routes divide again towards the trunk road that links Emona and Aquileia and towards Tergeste. The ramparts that are today partially preserved stretched from the canyon of the Rječina River to the next natural barrier that stretched to the north – the canyon of the Zala Creek. We can follow them for a distance of 2.4 km. The ramparts were researched at this section in the 1960s. The ramparts of this part of the *Claustra* reach a thickness of 90 cm, but there are 1-metre wide buttresses on their interior side, distributed every 3 metres. It is presumed that the buttresses were built for the needs of a sentry walkway. There are also three towers at this segment, located at strategic points at the Čelo, Rebar and Kuk positions. These towers had a rectangular floor plan of 4 by 4 m.³⁴

STUDENA SECTOR

The cited pass through the Mlaka valley was defended with another segment of the ramparts. The ramparts at this position run to the north-west for 6 km, following



Fig. 10 A section of the *Claustra* at the Za Presiku site near Studena (author's photo).

the configuration of the terrain and adapted to it (Fig. 10). The wall can for the most part be followed as a scattered accumulation of stone. Research and conservation work was conducted at several positions in the 1930s³⁵ and 1990s.³⁶ These are the positions at Na Ravno, Za Presiku and Vranjino. A 5 by 5 m tower was discovered at the Na Ravno position and – given the remnants visible on the terrain – we can surmise the existence of similar towers at several other positions. The ramparts stretch along an area that intersects all possible directions of penetration towards the cited Mlaka valley, and finish at the drop-off of the first steep and high upland slopes that in fact constitute the beginning of the highland and difficult terrain of Gorski Kotar.

SECONDARY FORTRESSES

Two late Roman fortifications situated on the route of the vital Senia–Tarsatica–Aquileia road certainly belong to this part of the *Claustra* system, one of which is situated ahead of the *Claustra* itself, while the other is situated to its rear. The first of these is the fort at Solin, located to the east of the *Claustra*, at a position that offered excellent control of the mainland and maritime approach to Tarsatica. The fortress was located about 4 km to the east of Tarsatica. It is bordered on the one side by steep cliffs, while the other has a 2 m wide rampart with three towers, one of which was a portal. The small archaeological finds discovered confirm that it was in function in the period the *Claustra* system existed.³⁷

³⁴ Klaić 1901, 173; Šašel & Petru 1971, 55; Starac 2009, 278.

³⁵ Šašel & Petru 1971, 60.

³⁶ Starac 2009, 280–6.

³⁷ Starac 2011, 1–9.



Fig. 11 A section of the *Clastra* near Prezid (author's photo).

Fig. 12 3D model of the terrain with the positions of confirmed *Clastra* structures in present day Croatia (Zlatan Novak, Josip Višnjić).



This was an excellent spot from which it was possible to inform the headquarters at Tarsatica whether the enemy was moving toward the town, or trying to bypass it using the road that led towards Grobnik Field and the Mlaka valley. In this manner headquarters could easily react appropriately and on time.

The second fortress is Pasjak, situated about 23 km to the north-west of Tarsatica, alongside the Tarsatica–Tergeste road. The fort is surrounded by ramparts of a length of about 400 m on which four towers have been identified. The towers were situated along the two entrances to the castle. The ramparts reach a width of 3 m. Given the small number of finds collected, it appears that the fort was not in use for an extended period. Based on numismatic finds we can also place its construction at around AD 260.³⁸

THE CLAUSTRA SEGMENT AT PREZID

Ramparts have not been found in the approximately 20 km that run through uninhabited highland regions of Gorski Kotar and in which we do not find natural communication routes to the west. Hypotheses of their existence in this area emerged in the early 20th century³⁹ but surveys of the terrain over the past two years did not reveal evidence of their presence. The cited lack of major communication routes to the west raises the question of the justification for their existence.

The final segment of the ramparts in present day Croatia are located at the only natural line of communication that provides for unimpeded passage from the Gorski Kotar area to the west. From here access is possible to the chief road from Emona to Aquileia. The cited segment of the ramparts is located at the settlement of Prezid (Fig. 11).⁴⁰ Routes from the east to Prezid led over the valley of the Kupa River and we know of sections of the routes that led from the northern Adriatic to these highland areas. The ramparts perpendicularly intersect the valley, with two arms running to the sides of the valley towards the east, creating a U-shaped formation. The total length of this segment of the ramparts is about 2.8 km, with the length of the transverse arm a little over 900 m. Research of this segment was conducted in the early 20th century, when three towers were discovered, now no longer recognizable in the terrain. During the latest small-scale

trench exploration conducted in 2012 it was established that the wall attains a width of 1.2 m at this segment. This segment of the ramparts, as has already been noted, was linked to the defence of the Emona–Aquileia road, and was also connected to the castle at Nadleški Hrib and to segments of the ramparts at Benete (Fig. 12).⁴¹

Conclusion

The *Claustra Alpium Iuliarum* defensive system was created in response to the threats existing at the time, during which even the very core of what was then the most powerful state was increasingly in peril. We can follow its origins from the mid-3rd century. From then it gradually developed and, over a period of almost two centuries, constituted the last line of defence of the heart of the Empire. The bulk of the defensive structure was concentrated on the defence of the two most important roads that led into northern Italy from the east, i.e. from Dalmatia and Pannonia. These are the Emona–Aquileia and Tarsatica–Aquileia roads. Besides a large number of defensive structures concentrated on the routes of these roads, great care was given to the defence of access routes and natural passes that could have avoided or bypassed the main body of the defence. It appears that the ramparts were placed at all the locations where the passage of a large number of military units was possible, while the builders depended largely on the existing natural barriers for the defence of the remainder of the area.

It appears that the system developed gradually and that some parts of it may have been built at a later time. For the Slovenian part of the *Claustra* we have evidence that confirms this hypothesis.⁴² In the Croatian part of the *Claustra* we can assume that, because of the different construction technique and a forward position in relation to the main line of defence, the Jelenje Sector was built at a later period than the rest of southern part of *Claustra* system.

While it was built with the intention that it should protect *Italia* from barbarian peoples, the system in fact most often served as a theatre of conflict between various

³⁸ Starac 1993, 27–36; Starac 2004, 24.

³⁹ Klaić 1901, 175; Puschi 1902, 147; Depoli 1912, 26; Degrassi 1954, 131; Šašel & Petru 1971, 62, 63.

⁴⁰ A loose translation of the name of this settlement is 'in front of the wall'.

⁴¹ Šašel & Petru 1971, 63, 64.

⁴² The examples of Nauportus and Ajdovski Zid.

pretenders to the imperial throne and decisive battles in these conflicts took place in the area of the Claustra. The defensive system was thus only partially used in its primary purpose while the Roman Empire crumbled from within. The system was abandoned not long after these battles. Material evidence from the researched sites bears witness to its abandonment in the early 5th century.

Written evidence also confirms the abandonment of the system in the 5th century. The system is not mentioned during the Visigoth incursions or during the Ostrogoth incursions. Prospero Tiro (*Epitoma chronicon* 1367) even notes that the barriers in the Alps were not employed during the Hun invasion, which could have served to repel the attack.⁴³ It is evident then that the ramparts still existed in the mid-5th century, but that they were not used even at the moments of greatest peril to Italy. A very robust and impeccable state administration was certainly required to maintain a system of this complexity, one the Western Roman Empire no longer possessed in the 5th century.

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⁴³ Šašel & Petru 1971, 41.

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„FRÜHBYZANTINISCHE BEFESTIGUNGEN“ ALS SIEDLUNGSGRUNDEINHEIT IM ILLYRICUM DES 6. JAHRHUNDERTS

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Zusammenfassung

Auf dem Territorium des frühbyzantinischen Illyricums sind Hunderte von Befestigungen aus dem 6. Jh. erforscht worden, die meisten durch Prospektionen oder Probeschnitte, einige durch systematische Ausgrabungen. In diesem Beitrag wird eine Karte ihrer approximativen Verteilung auf der Balkanhalbinsel vorgelegt und dafür argumentiert, dass es sich bei diesen Anlagen, oft in entlegenen Höhenpositionen erbaut, vorwiegend um befestigte Dörfer handelt, welche die Siedlungsrundeinheit bildeten. Dabei werden andere, wie z. B. mit dem Bergbau verbundene Funktionen nicht ausgeschlossen. Siedlungen mit zentralörtlicher Funktion („Städte“) werden separat betrachtet, obwohl auch sie einen Ruralisationsprozess durchliefen. Archäologische Funde und Befunde, die eine solche Argumentation unterstützen werden in diesem Rahmen kurz erwähnt. Mit Ausnahme der Situation am Donaulimes widerspricht der gegenwärtige Forschungsstand der Vorstellung von überregionalen Verteidigungslinien. Die Positionen der größtenteils im 6. Jh. neu gebauten Anlagen waren die Folge einer durch Barbareneinfälle verursachten grundlegenden Änderung des Siedlungsmusters, die sich prägend auf das überregionale Landschaftsbild auswirkte. Dabei ist eine gewisse Standardisierung in Plan und Bauweise zu vermerken, mit wiederkehrenden fortifikatorischen Elementen.

Im Illyricum und auf der Balkanhalbinsel, zu der auch Thrakien gehört, sind für die Forschung besonders seit dem letzten Viertel des 20. Jh. Hunderte von „Frühbyzantinischen Befestigungen“ anhand archäologischer Methoden erschlossen und kartiert

worden – in Slowenien,¹ Dalmatien,² Bosnien und der Herzegowina,³ Serbien,⁴ Mazedonien,⁵ Albanien,⁶ Bulgarien⁷ und in der Türkei.⁸ Die Zahl der dokumentierten Fundstellen aus dem 6. Jh. bis zum Anfang des 7. Jh., manchmal mit Vorgängerschichten aus dem 4. und

¹ Ciglencčki 2008, 481–532.

² Gunjača 1986, 124–34; Tomićić 1996, 103–16.

³ Špehar 2008, 559–94.

⁴ Milinković 2008, 533–57.

⁵ Mikulčić 2002.

⁶ Baçe 1976, 45–74; Popović 1984, 181–243.

⁷ Динчев 2006.

⁸ Crow & Ricci 1997, 235–62.



Abb. 1 Die spätantiken und frühbyzantinischen befestigten Anlagen auf dem Balkan, approximative Verbreitungskarte (M. Milinković).

5. Jh., ist vom Forschungsstand abhängig und steigt kontinuierlich. Bislang kann nur für Mazedonien festgestellt werden, dass die meisten Fundstellen bereits erfasst sind, wenngleich hier Revisionen nötig sein werden (Abb. 1). Die Anlagen sind dank Prospektionen oder Probeschnitten bekannt, bei einigen wurden auch flächendeckende systematische Ausgrabungen vorgenommen.

In der Forschungsgeschichte sind einige Deutungsversuche zu solchen Befestigungen zu vermerken, die z. T. von

der Annahme ausgingen, dass diese überwiegend einen militärischen Charakter hatten. In diese Richtung lief auch die Vorstellung von überregionalen Verteidigungslinien⁹ oder die Interpretation der Anlagen als Posten für die Kontrolle des Straßennetzes,¹⁰ was in den meisten Fällen als nicht wahrscheinlich oder zumindest nicht erstrangig anzusehen ist. Ähnlich verhält es sich bei deren Deutung als nur vorübergehend benutzte Refugien, welcher die Kirchenüberreste, die Schichtenbildung und das bewegliche und unbewegliche Fundmaterial widersprechen.¹¹

Eine nicht abgeschlossene Neukartierung¹² und zusammenfassende Untersuchung dieser Anlagen hat ergeben, dass es sich zum größten Teil um territorial breit verstreute kleinere befestigte rurale Siedlungen handelt, um *Dörfer*, die – wie anderswo – auch im Illyricum des 6. Jh. die Siedlungsgrundeinheit bildeten.¹³ Das wird bei einer Zahl, die nahe an 1000 kommt, schon mengenmäßig betrachtet klar. Es ist unmöglich, unter solchen Umständen von einer anderen Siedlungsform oder Funktion zu sprechen, auch wenn diese manchmal gemischt sein kann (wobei nicht nur militärische, sondern auch wirtschaftliche Aspekte eine Rolle spielen, wie z. B. der Bergbau).¹⁴ Es kann kaum 1000 Städte oder befestigte Militäranlagen im Illyricum und in Thrakien gegeben haben, wobei die angeführte Zahl nur einen Teil der Gesamtanzahl darstellt. Trotz der regionalen Unterschiede im Forschungsstand ist klar ersichtlich,¹⁵ dass es sich hier um ein flächendeckendes und weit verbreitetes Phänomen handelt, um die *Siedlungsgrundeinheit*, welche nichts anderes als ein Dorf sein kann, auch wenn in den ruralen befestigten Siedlungen Berufe vorkommen können, die nicht nur mit der Landwirtschaft verbunden sind. Bei der Erbauung der einzelnen Anlagen wurde auf mikroregionale Aspekte Rücksicht genommen, außer bei solchen am Limes oder

⁹ Beispielsweise Овчаров 1982, 19–20; vgl. auch Динчев 2006, 34. Die Donaulimesstrecke und die sog. Langen Mauern wie die des Anastasius, welche das Schwarze Meer mit dem Marmara-Meer verband, die Gallipoli-Mauer und die Hexamilion-Mauer auf dem Isthmus sind hier ausgenommen, vgl. Crow & Ricci 1997, 235–62; Gregory 1993, 1–151. Kritisch zu überregionalen Verteidigungslinien Milinković 2008, 557.

¹⁰ Das Straßennetz des 6. Jh. ist nur ungenügend bekannt und kann generell nicht mit dem römerzeitlichen identifiziert werden, u. a. weil neue Siedlungslagen neue Verbindungen verlangen.

¹¹ Милинковић 2010, 25, 22.

¹² Die Erfassung und Neukartierung der Befestigungen durch den Verfasser ist nicht abgeschlossen, besonders was das Gebiet des heutigen Griechenland anbetrifft. Eine Publikation dazu ist in Vorbereitung. Die angezeigte Verbreitungsdichte der Anlagen hängt zu gutem Teil vom regional unterschiedlichen Forschungsstand ab.

¹³ Milinković 2008, 556–7. Vgl. dazu Ciglencčki 1994, 239–54.

¹⁴ Vencislav Dinčev führt an, dass sich in den Diözesen Thrakien und Dakien vergleichsweise die größte Anzahl von Befestigungen im Oströmischen Reich befand: Динчев 2006, 54. Für Bergbau vgl. auch Mikulčić 2002, 119–20.

¹⁵ Es ist mit gutem Grund anzunehmen, dass die Verbreitungsdichte der Anlagen in Mazedonien und in einigen Teilen Serbiens (deren Kenntnis den Aktivitäten der einzelnen Forscher zu verdanken ist) zukünftig auch in den meisten anderen Regionen registriert wird. Die neueren Forschungsergebnisse in Serbien und anderswo bestätigen diese Annahme.

bei den sog. Langen Mauern. Der Umstand, dass die Dörfer befestigt waren, soll nicht täuschen – die Abwehrmauern könnten zwar als Eigenschaft von Städten betrachtet werden (vgl. *nam urbs ipsa moenia sunt, civitas autem non saxa, sed habitatores vocantur*, Isid. *Origenes* 15.2.1), dies ist aber bei den hier besprochenen Anlagen größtenteils nicht der Fall. Der Grund für ein solches Vorgehen muss in der allgemeinen Unsicherheit zu finden sein, die durch Einfälle von verschiedenen Barbarenstämmen verursacht war. Daraus entstand der Bedarf an Maßnahmen, die in früheren Zeiten nicht üblich waren.

Neben der Menge an Soldaten, die bei einer solchen Anzahl der Befestigungen von den Garnisonen hätte gestellt werden müssen,¹⁶ tatsächlich aber im Illyricum in ungenügendem Umfang vorhanden war, können zahlreiche archäologische Funde vorgelegt werden, die außerhalb der quantitativen Argumentation eine Deutung der befestigten Anlagen als Militärstützpunkte nicht fundieren: Frauen- und Kindergräber in den zugehörigen Nekropolen, Kleinfunde, die für eine zivile Bevölkerung typisch sind (landwirtschaftliches Gerät wie Hacken, Sensen, Sichel, Beile usw.; Viehglocken, Wollscheren, Spinnwirtel, Webgewichte, Frauenschmuck) und verschiedene, meist in einfacher Bautechnik, ohne Mörtel erstellte Gebäude, darunter auch mehrere Kirchen, was bei einem Kastell oder Refugium überflüssig wäre.¹⁷

Diese Siedlungen sind nach dem aktuellen Forschungsstand zum größten Teil in Höhenlagen positioniert, oft mehr als 500 m ü. NN, manchmal höher, mehr als 1500 m ü. NN,¹⁸ was in der ersten Hälfte des 6. Jh. eine grundlegende, massive Neuverlegung und Änderung des gesamten Siedlungsnetzes und damit auch der Wirtschaftsform im Illyricum zugunsten der Viehzucht und des Bergbaus zur Folge hatte.¹⁹ Die Befestigung von ruralen Siedlungen ist durch Barbareneinfälle verursacht, ebenso wie ihre räumliche Verlegung. Somit ergibt sich, dass ohne eine Analyse der sog. frühbyzantinischen Befestigungen das Erfassen der Siedlungsstruktur und der demographischen, wirtschaftlichen, kulturellen und anderen Verhältnisse im Illyricum des 6. Jh. und Anfang des 7. Jh. n. Chr. unmöglich ist. Die Rekonstruktion der Kulturlandschaft und des überregionalen Landschaftsbildes insgesamt



Abb. 2 a: Korintija, Insel Krk, Norddalmatien (Kroatien), Lage der Befestigung; b: Ostrovica-Zlostup, Südwestserbien, Lage der Befestigung; c: Djerekare-Djurdjevica, Südwestserbien, Lage der Befestigung (M. Milinković).

¹⁶ Vgl. Lee 2005, 113–33; Treadgold 1995, 47, 60–4.

¹⁷ Милинковић 2010, 222–9; Milinković 2008, 547–51, 556–7.

¹⁸ Die Feststellung ist interessant, dass die Höhengiedlungen in Serbien um einige 100 m höher lagen als die in Slowenien erbauten (bis zu 1048 m ü. NN.). Die frühchristliche Kirche auf ‚Nebeske stolice‘, im Kopaonik-Gebirge in Südwestserbien, befindet sich auf 1800 m ü. NN., vgl. Milinković 2011b, 285, 287 Abb. 2.

¹⁹ Erste Ansätze zur Ausnutzung von Höhenlagen stammen aus dem 3. Jh. Diese Nutzung war mit aller Wahrscheinlichkeit nur kurzzeitig und refugialen Charakters, vgl. Milinković 2008, 538–45; Mikulčić 2002, 120. Der Bergbau war schon in römischer Zeit für den Balkan wichtig; Dušanić 1995, 219–25.

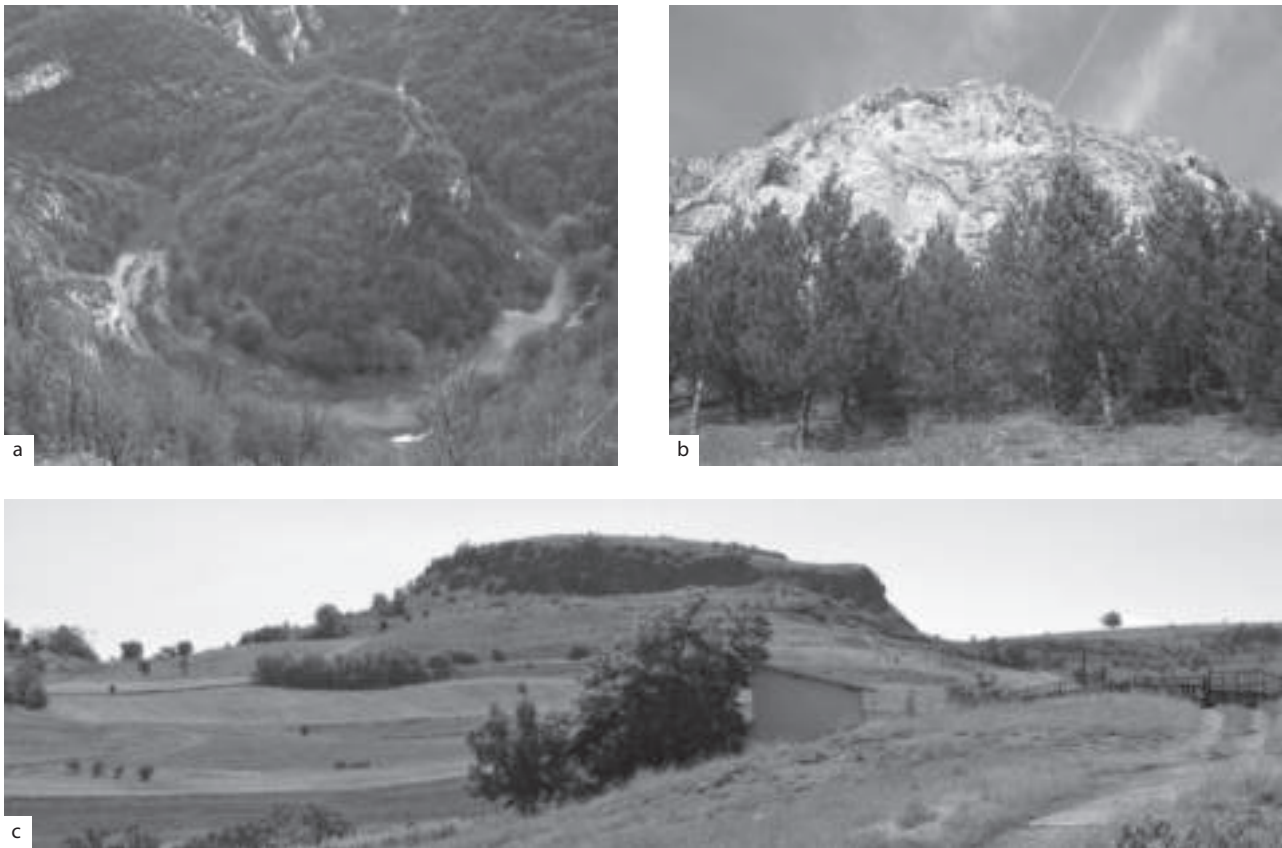


Abb. 3 a: Žagubica-Pregrada, Nordostserbien, Lage der Befestigung (D. Jacanović); b: Laznica-Pčelinji Krš, Nordostserbien, Lage der Befestigung (D. Jacanović); c: Konjuh-Golemo Gradište, Nordostmazedonien, Lage der Befestigung.

müssen ohne eine solche Betrachtungsweise aber abstrakte Begriffe bleiben (Abb. 2, 3).

Unter den befestigten Siedlungen gibt es auch solche, die eine zentralörtliche Funktion hatten und als in verschiedenem Ausmaß ruralisierte Städte angesprochen werden können (Konzentration von Handwerk, Metallverarbeitung, Handel, kirchlichen Strukturen, Administration, Militär; Abb. 4, 5). Der Desintegrations- und Ruralisationsprozess darf hierbei nicht außer Acht gelassen werden.²⁰ Selbst diejenigen Anlagen, deren Erbauungs- bzw. Erneuerungszweck anfänglich militärischen Charakters war, wie die Kastelle an der Donaulimesstrecke, haben einen Ruralisierungsprozess durchlaufen. Dies geht aus der Analyse des Kleinfundrepertoires hervor.²¹

Bei den erwähnten Befestigungen können nicht nur siedlungsgeschichtliche, sondern auch fortifikatorische

Aspekte analysiert werden, z. B. die typisierte Lageauswahl bei Höhenanlagen. Bei dieser wurden Positionen bevorzugt, die nur von einer Seite leichter zugänglich waren bzw. Festungsmauern z. T. unnötig machten, da sie durch Steilhänge abgegrenzt waren (Abb. 2–3). So wurde in einer im ganzen Illyricum groß angelegten, von Prokop beschriebenen Bauaktion an Zeit, Aufwand und materiellen Mitteln gespart. Es handelte sich um ein durchdachtes Befestigungssystem, bei welchem praktische und – außer bei den dominanten Positionen mancher Kirchen – nicht repräsentative Gründe vorrangig waren (beispielsweise Identitätsbildung, die Abgrenzung des Drinnen vom Draußen u. ä.). Der Grundriss war konsequent den Geländebeschaffenheiten angepasst und somit unregelmäßig (Abb. 6a–d; 7a–d), außer in Tieflagen oder im Falle von weiterbenutzten oder erneuerten römischen Anlagen.²² Bei den meisten Befestigungen, besonders bei Höhenanlagen, wurden die äußeren Mauern in Opus incertum errichtet, in einigen Fällen – an der

²⁰ Auch weiterhin Popović 1982, 545–66. In jüngerer Zeit dazu Milinković 2007, 179–88.

²¹ Špehar 2010, 148–54.

²² Milinković 2007, 169–74; Kondić 1984, 133; Milinković 2011a, 138.



Abb. 4 Rekonstruktion von Caričin Grad/*Iustiniana Prima* (?), Südserbien (Caillet u. a. 2010, Taf. IA).



Abb 5 Jelica-Gradina, Westserbien. Dreidimensionale Rekonstruktion, Stand 2009 (M. Milinković).

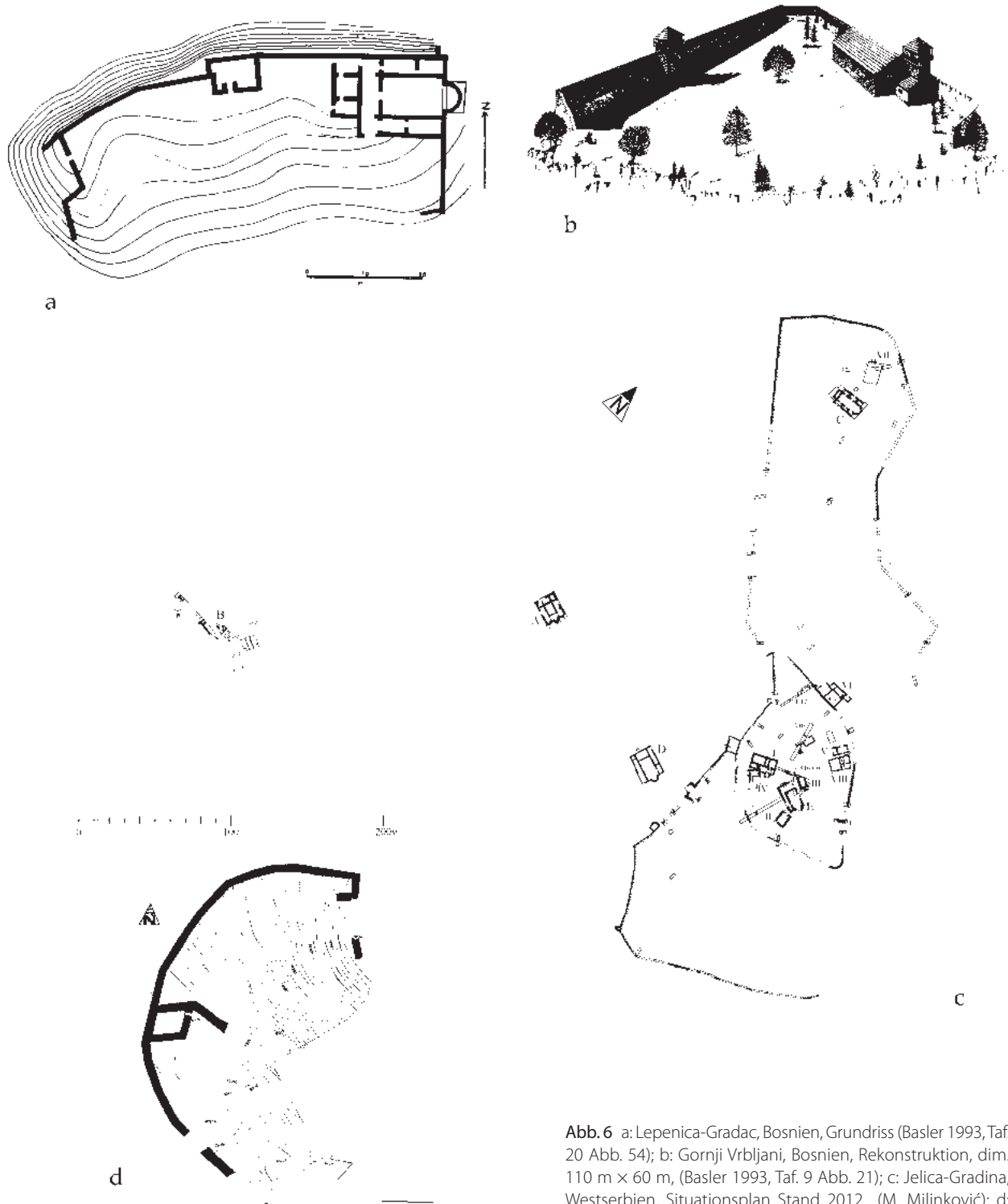


Abb. 6 a: Lepenica-Gradac, Bosnien, Grundriss (Basler 1993, Taf. 20 Abb. 54); b: Gornji Vrbljani, Bosnien, Rekonstruktion, dim. 110 m × 60 m, (Basler 1993, Taf. 9 Abb. 21); c: Jelica-Gradina, Westserbien, Situationsplan Stand 2012 (M. Milinković); d: Ostra-Sokolica, Zentralserbien, Grundriss (M. Milinković).

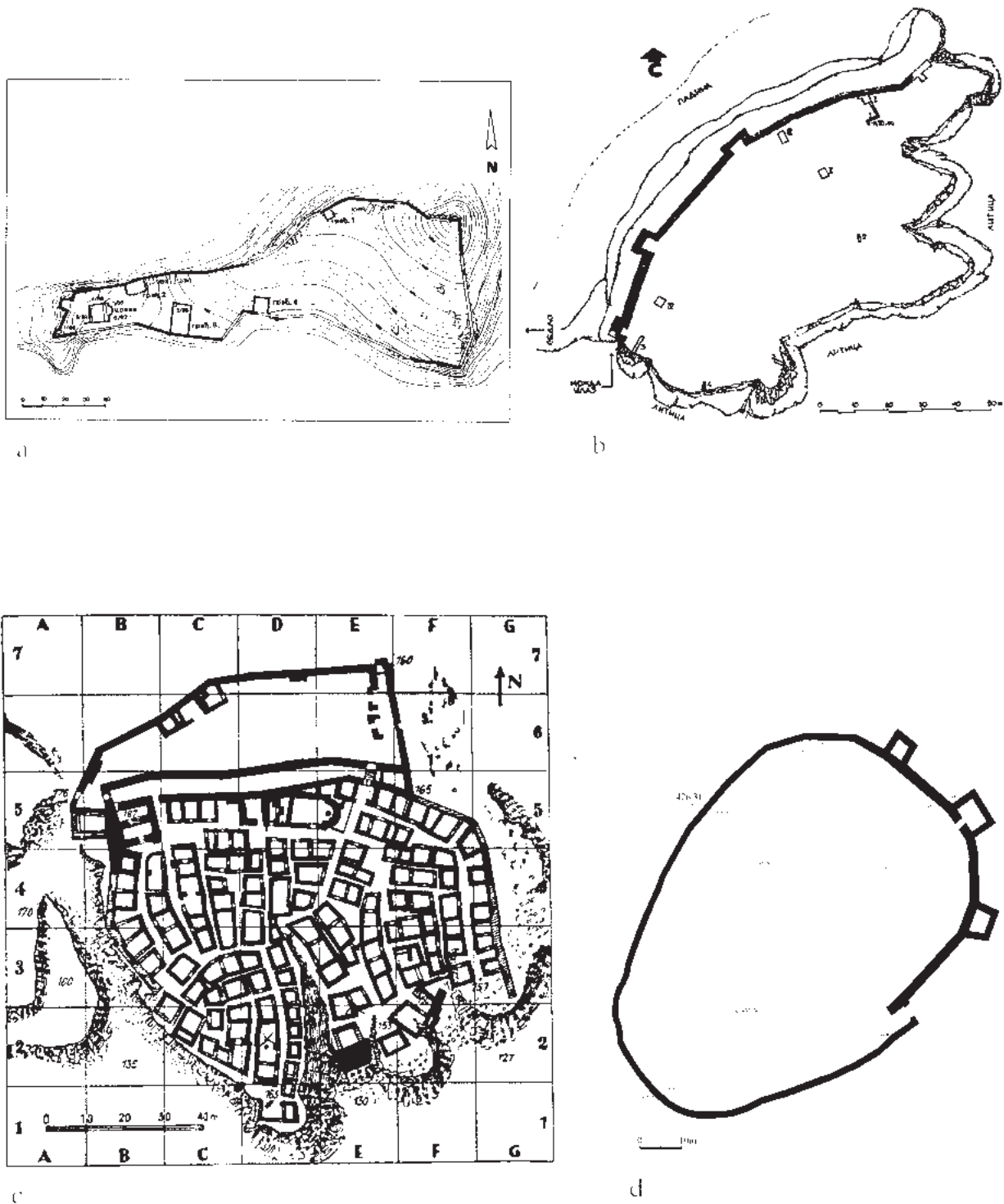


Abb. 7 a: Zlatni Kamen, Südwestserbien, Grundriss (Иванишевић 1990, 8 Abb. 1); b: Djerekare-Djurdjevica, Südwestserbien, Grundrißskizze (M. Milinković); c: Golemanovo Kale, Bulgarien, Grundriss (Bersu 1938, 32 Abb. 1); d: Cer-Konjuša, Nordwestserbien, Grundriss (M. Milinković).

Donaulimeslinie, in Caričin Grad oder Zlata – auch in *Opus mixtum*.²³ Dabei kam es vor, dass diese Mauern in Hangsituationen manchmal kaum mehr als 1 m breit waren, was keine große Höhe erlaubte. Offensichtlich wurde nicht mit lang andauernden Belagerungen gerechnet.²⁴ Dies ist mit der Art der Kriegsführung der Barbarenstämme und ihren begrenzten logistischen Fähigkeiten verbunden, besonders im gebirgigen Gelände. Die Mauerstärke war dem Grad der Zugänglichkeit angepasst, wie auch die Verteilung der Türme. Wo die Anlagen leichter zugänglich waren, wurden die Mauern breiter errichtet und die Türme näher aneinander gebaut (Abb. 7b, d). Bei Türmen und Toren sind wiederkehrende Typen festzustellen – fünfeckige Türme, die aufgrund der Ecke inmitten ihrer zum Feind gerichteten Front bei schräg auf die Seiten prallenden Geschossen einen Abprall-Effekt erzielten, Türme mit unregelmäßigem Grundriss, mit Seiteneingängen usw. (Abb. 6d; 7b, d; 8).²⁵ Bei Toren treten tangential angelegte Eingänge auf, eine seit der Vorgeschichte bekannte Lösung, die im 6. Jh. n. Chr. ihre Neuanwendung fand (Abb. 7d).²⁶ Obwohl es sich in der Mehrzahl um Dörfer handelte, kann eine gewisse fortifikatorische Raffinesse und Typenkonsequenz bzw. Standardisierung nicht übersehen werden, die schon bei der Lageauswahl anfängt. Dies hängt offensichtlich mit der Tatsache zusammen, dass im oströmischen Heer Militäringenieure tätig waren, wie der in Steininschriften erwähnte Viktorinos.²⁷ In einem hypothetischen Modell kann bei der aufwendigen Baumaßnahme an ein Zusammenwirken der Zentralverwaltung mit der bis zu diesem Zeitpunkt, wie angenommen werden kann, hauptsächlich in offenen Siedlungen lebenden lokalen Bevölkerung gedacht werden,²⁸ deren Lebensweise

so von Grund auf geändert wurde. Das Imperium Romanum war im Nordillyricum nach langer Zeit, nach den Hunneneinfällen Mitte des 5. Jh., wieder in vollem Umfang da, mit den von weit her kommenden Händlern und ihren Waren (Amphorenfunde), den Handwerkern, Priestern, Offizieren, Beamten, Steinmetzen, Künstlern und anderen mehr. Die archäologischen Funde und Befunde geben darüber ein reges Bild und ermöglichen eine Rekonstruktion der professionellen Tätigkeiten und damit gewissermaßen auch der soziologischen Gliederung der Bevölkerungsstruktur.²⁹ Es ist vorstellbar, dass schon bei der Lageauswahl neben der Geländebeschaffenheit auch der demographische Faktor und die Bedürfnisse der lokalen Einwohner berücksichtigt wurden. Inwieweit die lokalen Anwohner bei der Baumaterialbeschaffung und den Bauarbeiten involviert waren und ggf. auf welche Art, bleibt abzuschätzen, ist aber bei der riesigen, gleichzeitig ablaufenden überregionalen Neubau- und Erneuerungsaktion sehr wahrscheinlich. Ein solches Zusammenwirken bzw. eine nötige Hinwendung zum Selbstschutz ist jedenfalls durch die Erwähnungen von Lokalmilizen bekannt, die das unterbemannte oströmische Heer wenigstens bei der Verteidigung des eigenen Heimes ersetzten.³⁰

Die Positionen im Gelände können in der weitläufigen Region Illyricums in vier Hauptgruppen aufgeteilt werden: 1.) Lagen an der Donaulimesstrecke, 2.) Tieflagen, 3.) niedrigere Positionen in Berglandschaften und 4.) in Höhenlagen.

Zur ersten Gruppe ist zu bemerken, dass die Position der Befestigungen in römischer Zeit militärischen Aspekten folgte – die Kastelle wurden bei Mündungen von Nebenflüssen, die Einfallmöglichkeiten boten, oder gegenüber von Stellen errichtet, an denen die Donau leichter zu überqueren war.³¹ Hier ist wichtig, dass der Schutz vor allem durch die Donau gewährleistet war. Deshalb kommen in einigen Fällen Lösungen vor, die beispielsweise typisch für die Schwarzmeerküste in Bulgarien sind³² – das ist etwa der Fall bei der ehemaligen



Abb. 8 Typen von Turmgrundrissen vom Eisernen Tor (Donaulimes), (Kondić 1984, 135 Abb. 2).

²³ Kondić 1984, 135, 140, 142, 145, 153; Kondić & Popović 1977, 310, 320, 336–7. Für Zlata stammen die Angaben aus der Grabungsdokumentation der Philosophischen Fakultät in Belgrad, 2013 (Mihailo Milinković), Publikation in Vorbereitung.

²⁴ Wozniak 1982, 200.

²⁵ Kondić 1984, 135 Abb. 2.

²⁶ Милинковић 2010, 32–41.

²⁷ Feissel 1988, 136–46.

²⁸ Die materielle Hinterlassenschaft der Bevölkerung aus der zweiten Hälfte des 5. Jh. und vom Anfang des 6. Jh. ist noch ungenügend erfasst. Vgl. auch Zanini 2003, 196–223, bes. 218–20 und Zanini 2007, 381–405.

²⁹ Milinković im Druck.

³⁰ Wozniak 1982, 201.

³¹ Kondić 1984, 135.

³² Biernacka-Lubańska 1982, 65–8.

Donauhalbinsel Svetinja bei Viminatium, wo der Zugang vom Land durch eine geradlinig verlaufende Sperrmauer erschwert wurde.³³

Zur zweiten Gruppe: Dem aktuellen Forschungsstand zufolge sind Befestigungen in Tieflagen die Ausnahme im Vergleich zu denjenigen in Höhenlagen. Diese Verhältnisse werden auch durch die neuste Forschung nicht relativiert. Es können dennoch einige tiefer gelegene Befestigungen aufgezählt werden, wobei besonders auf Bedem-Maskare (Serbien) beim Zusammenfluss der Westlichen und der Südlichen Morava hinzuweisen ist, da dieses Kastell im 6. Jh. neu gebaut wurde – in untypischer Lage.³⁴ In der weiteren Umgebung von Kruševac in Zentralserbien sind von insgesamt 58 Befestigungen nur vier bis fünf in Tieflagen bekannt, bei gutem regionalen Forschungsstand.³⁵ Anders verhält es sich bei Gamzigrad/Romuliana, einem Bauwerk eher symbolischen und eigentlich nicht fortifikatorischen Charakters des Kaisers Galerius; dort konnte die bereits vorgegebene immense Mauerbreite und -höhe, obgleich dem Entstehungsgrund nach kulissenhaft, in der Nachfolgezeit nicht ignoriert werden.³⁶

Zur dritten Gruppe: Als Beispiele von Befestigungen in niedriger Berglandschaft sind diejenigen in der Umgebung von Kruševac anzuführen, bei welchen der relative Höhenunterschied zur Tallage von Gruppe 2 nicht allzu ausgeprägt ist. Sie sind jedoch nach den gleichen fortifikatorischen Prinzipien erstellt wie die Gruppe 4, die bereits oben beschriebenen Anlagen in ausgeprägten Höhenpositionen.

Es ist beeindruckend, dass innerhalb einer Epoche, in diesem Fall der frühbyzantinischen, in großen Mengen und regional übergreifend nicht nur militärische Stützpunkte und Städte, sondern auch rural geprägte Kleinsiedlungen bzw. Dörfer befestigt wurden, und zwar oft auf schwer erreichbaren und schon von Natur aus leicht zu verteidigenden Höhenpositionen, zu großem Teil *ex novo* (Abb. 1). Das bedeutete eine gründliche Umwandlung des Landschaftsbildes, wie sie auf der Balkanhalbinsel bis in die Neuzeit nicht wiederholt wurde. Die Gipfel der Berglandschaft Illyricums waren im 6. Jh. in kurzer Zeitabfolge zu Hunderten, beinahe zu Tausenden, durch Festungsmauern bekrönt, in einem überregionalen Netz von Anlagen, die miteinander visuell verbunden waren, wobei an der dominantesten Stelle

in vielen Fällen eine Kirche stand – auch als Symbol des Glaubens und der zivilisatorischen Zugehörigkeit, in der unruhigen und durch Einfälle von Fremdvölkern bestimmten Zeit. Nach den Angriffen der Awaren und der Slawen im 6. Jh. und zu Beginn des 7. Jh., wie auch nach der slawischen Landnahme, endeten viele in Brand und Zerstörung, die Restbevölkerung lebte mit ihren Herden weiter in den bereits zuvor besiedelten Höhen.

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³³ Милошевић 1988, 39–47.

³⁴ Milinković 2011a, 138.

³⁵ Freundliche Mitteilung von Dušan Rašković, Nationalmuseum in Kruševac, nach neuestem Forschungsstand.

³⁶ Milinković 2011a, 138.

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Regionally Confined Phenomena

INTRODUCTION

Silke MÜth

The 6th session of the conference dealt with regionally confined phenomena. In contrast to most of the other sessions, the subjects of which correspond to those of meetings of the 'Fokus Fortifikation' network, this particular issue was only a part of the 5th network meeting at Damascus about the 'Regional context of fortifications', and became the subject of a work group in which both chairs of this session took part.¹ While working on this topic, we found out that as far as we could observe there do not seem to be that many regionally confined phenomena found with fortifications after all. The question arose as to whether this is due to the fast dispersal of knowledge about fortification techniques and strategies, or to other as yet unknown reasons, or whether perhaps a number of regional phenomena simply have not yet been identified. Due to these questions and also because the topic has not been systematically treated in fortification literature yet, we decided to dedicate a session to regionally confined phenomena at our conference, in order to discuss the topic in a wider scholarly context. Within the submitted proposals for the conference, however, we did not find many that explicitly dealt with regionally confined phenomena, for which reason the following articles will also treat phenomena that are not regionally limited strictly speaking, but are still to be classified as regional.

The most important question is, of course, how to define regionally confined phenomena, and this is already one crux: there is no sharp definition to be found, and it is therefore to some degree up to each individual scholar if a phenomenon is to be defined as regionally confined or not. We decided to define regionally confined phenomena as those that emerge in a certain period only in a clearly definable, limited region in the ancient world in a significant number. The sporadic existence of the same phenomenon outside of the defined region does not necessarily overthrow its characterization as regionally confined, because these exceptions might perhaps be due to contacts with the region in question and influences from there, or they might be isolated occurrences. Important is that within the considered period, the number of attestations of a phenomenon in the defined region is significant, while the number of exceptions is *not*. And this might of course be a matter of individual interpretation.

Once a regionally confined phenomenon has been identified, the next question is, wherein its origins lie. In a first overview, we found out that regional phenomena are mostly not to be found in the general strategy and concept of a fortification, but rather seem to be due to topographical particularities, traditional techniques

¹ Apart from the session chairs U. Ruppe and S. MÜth, J.-C. Bessac, C. Brasse and J. Giese took part in this group. For a further treatment of the subject, see S. MÜth & U. Ruppe, 'Regional begrenzte Phänomene', in *Ancient Fortifications. A compendium of theory and practice*, S. MÜth & P.I. Schneider *et al.* (eds.) (Fokus Fortifikation Studies, 1), Oxbow 2016, 231-48.

and forms, or deliberate design. Thus at a first glance, the theory of a rapid spread of fortification knowledge also into remote areas seems to be confirmed, and in those cases, where fortifications lag behind the up-to-date standard, other reasons can be found, such as the character of the specific danger against which they were erected, particular functions of the monument, limited economical means of the builders, etc. Therefore it is necessary to assess very carefully all the specific

local contexts of a fortification, i.e. its political, social, economical and topographical circumstances as well as the available know-how and the traditions of craftsmanship, in order to find out about the reasons for a regional phenomenon.

Altogether, this is still an open field of research which offers interesting aspects and requires systematic and thorough investigation.

THE FORTIFICATIONS OF IRON AGE *OPPIDA* IN SOUTHERN DRÔME (FRANCE) AND THE CONTROL OF THEIR TERRITORIES

Stephan G. Schmid, Caroline Huguenot & Katrin Kermas

Abstract

The southern part of the modern French Department of Drôme is situated between a mountainous zone (the southern French Pre-Alpes) and a fertile plain (the valley of the Rhône), corresponding to an area of dense cultural contacts in Antiquity. In broader terms, the area is situated in the border zone between the Celtic cultures of central Europe and the Celtic cultures of the Mediterranean coast, with contacts as far as the Greek city of Massalia. This also affects the construction of fortified sites. In southern Drôme, a series of fortified *oppida*, presumably of Iron Age date, is known, occupying characteristic hilltops in order to control access roads between the plains and the mountains. Since it is not known exactly to which ancient populations the different sites belonged, several possibilities as to how the location of fortified sites was chosen exist. A further point of interest is the construction technique of their fortifications. Though all known fortifications of hilltop *oppida* from southern Drôme seem to be constructed exclusively in a dry stone technique, the use of mixed techniques with wooden palisades or even the so-called *muris gallicus* technique cannot be ruled out. Furthermore, most *oppida* seem to show multiple fortifications, i.e. outer and inner rings of fortifications or something like *diateichismata*, subdividing agglomerations into lower and higher parts.

Starting with the *oppidum* of the ‘Rocher des Aures’, this paper proposes an analysis of the *oppida* in southern Drôme, studying their distribution pattern as well as putting them into their historical context as far as possible. A concise description of the respective locations and especially their fortifications, checked against and compared with the information available from Greek and Roman geographers and historians, completes the picture.

Introduction

In this paper we would like to present some preliminary thoughts regarding some fortified hilltop settlements (*oppida*) in the southern part of the French department of Drôme (Fig. 1).¹ The starting point for these reflections is a recently initiated archaeological project focusing on one of these sites, the ‘Rocher des Aures’ near the village of La Roche-Saint-Secret-Béconne (no. 38 on Fig. 1).² The area under consideration for the present contribution extends from the Cévennes to the French Prealps and is marked by the Rhône valley in general as well as by the fact that in many ways it is an area where different regional phenomena meet. On the one hand, this is true for the climatic situation:³ we are in a zone where the Mediterranean, the moderate Mediterranean, the Continental as well as the moderate Continental climates change from one to another over a very small area, which of course has considerable consequences for vegetation, agriculture, etc. On the other hand, this is also true for the topographical situation: within only a few kilometres the countryside changes from the flat and fertile Rhodanian plain to the quite steep and somewhat hostile outskirts of the French Prealps.

The region we are dealing with is situated at the foot of the Montagne de la Lance, and it prominently overlooks the Rhodanian plain and can be covered with snow during winter. During Antiquity, this must have been an area of continuous exchanges and contacts, and also a zone where different Celtic tribes and confederations met. At least this is what we learn from the Greek geographer Strabo (4.1.11, quoting Artemidoros of Ephesos), who says that the Cavarii occupy the plain in this region, while ‘above them’ dwell the Vocontii and other tribes

or confederations of tribes.⁴ No matter which sources and information Strabo is relying on and, therefore, for what period this description should be taken into consideration, it would be extremely interesting to be able to fix these borders more precisely, to allow us to assign the various fortified places to these peoples. However, it happens that the very same area is also a kind of borderline for modern research, because it is located too far south for the specialists of the European Celts and too far north for the specialists of the Mediterranean Celts.⁵ Therefore, while modern research was able to draw a rather concise picture for the territorial organization of the above-mentioned peoples further to the south, at least for the Roman period, this is not yet the case for the area under study, especially when it comes to the previous protohistoric period. It becomes clear that the ‘border’ (whatever that means in this context) between the confederations of the Cavarii and the Vocontii as well as between the tribes of the Tricastinii and the Vocontii passed through the area, but it is far from being clear where exactly.⁶ While the observation and protection of territories and their borders certainly was one important *raison d’être* for fortified places on hilltops, so-called *oppida*, their connection to important communication roads, as trading places, in order to protect them, to collect taxes and so on should not be underestimated. And again, the area under consideration, with the *oppidum* of the Rocher des Aures, does fulfil these criteria, since it is located along an important protohistoric road connecting Massalia with the Rhône valley, and more specifically with Vienne and Lyon (see Fig. 1).⁷ As a matter of fact, it was only during the Roman period that the lower part of the Rhône valley became the foremost communication road (that it still is today) for terrestrial transport in this part of the world. Before the construction of this southern stretch of what

¹ The term *oppidum* is variously used in different regions dealing with pre-Roman Celtic structures that eventually lead to a kind of (proto-)urban evolution; see in general the concise overview offered by Boos 1989. While one aspect of archaeological research, following the reflections of Dehn 1951 and others, postulates a minimum size (usually around 20–30 ha), as well as specific functions, including political, economic and cultic (Audouze & Buchsenschutz 1989; Collis 1984), another group of scholars has a more generous approach allowing a wider definition of the term *oppidum* (as pointed out by Boos 1989, 67–72), that would better fit the real use of it in Caesar’s *De Bello Gallico* (*ibid.* 72–3). The discussion is ongoing (see e.g. more recent approaches in Arnold & Gibson 1995) and a final decision seems out of reach for the time being. Whatever the case, for Southern France, the region we are dealing with in this contribution, as well as for other Mediterranean areas, the term *oppidum* is used for fortified hilltop settlements, regardless of function and size (Garcia 2004, *passim* and esp. 7–8; Py 1993, *passim*), and there is no reason not to stick with this definition; see also below notes 44, 46.

² www.auac.ch/para.

³ For a general introduction into the geology, geography and climate of the area in Antiquity see Provansal *et al.* 1999; Berger & Brochier 2006; Wullschlegel 2010. In a much wider and more general frame one can consult Meyzenq 1984.

⁴ For an archaeological comment on Strabo’s passage see Thollard 2009, 30–3, 77–90; an overview of the question can be found in Bois 2010a; Planchon 2010.

⁵ As representative examples one might consult Garcia 2004 and Fichtl 2005.

⁶ The best overview on the question still is Barruol 1969, 254–67; see also Planchon 2010; Planchon & Tarpin 2009, especially figs 6 and 7, as well as p. 77 for a discussion of the term ‘confoederation’. See also below note 39.

⁷ This route follows more or less the modern D538, and would have formed the main north–south road of the Cavarii Confederation (Barruol 1969, 55); Chapotat 1981; Sergent 1998, 45–6; Jung & Odier 1999, 87–8; Jung 2009, 101–2.

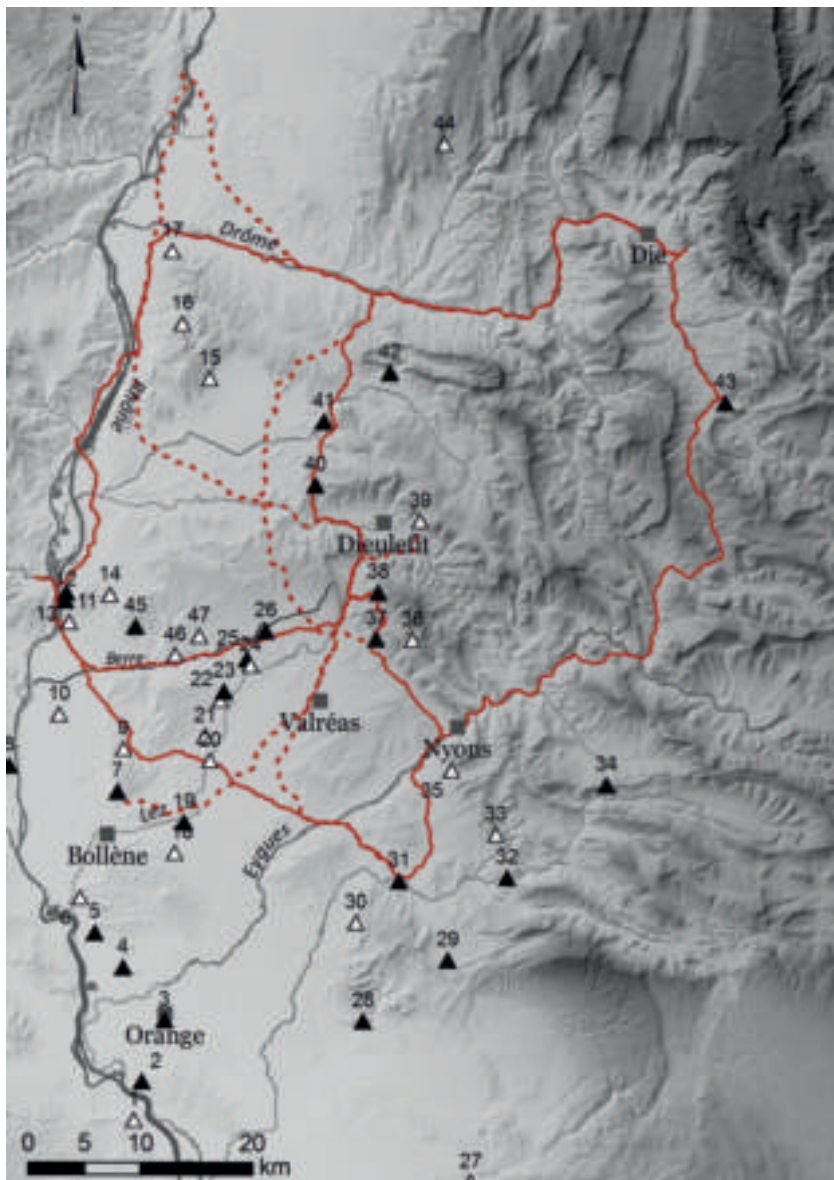


Fig. 1 Map of *oppida* in the region under study. Archaeologically confirmed *oppida* are indicated with a black triangle, supposed *oppida* with a white triangle. (K. Kermas & C. Huguenot using ASTER data).

is nowadays known as the via Agrippa, which dyked and diverted the river;⁸ its meanders, the swamps⁹ and the hostile local populations were major obstacles, at least for a good part of the year (as far as the climatic issues are concerned ...). Therefore, alternative routes were much looked for, including the one passing through our study area, the so-called para-Rhodanian road.¹⁰

The Rocher des Aures

It is precisely along this road that the Rocher des Aures is located (no. 38 on Fig. 1). Parts of its ancient remains must already have been known to the surveyors preparing the map of France during the 1850s; at least it seems as if they mapped the impressive remains of a fortification wall.

⁸ Jung & Odier 1999, 86–7; Bois 2010b, 92–5; Jung 2009, 85–97; in general terms on the road network installed by Agrippa see Frézouls 1988.

⁹ Barruol 1969, 238–9. According to Chapotat 1981, the Rhône was probably not navigable, at least not before the 2nd century BCE. See also Bois 2006, 72.

¹⁰ First introduced by Chevalier 1920/1968, 16, 59–86 and pl. XXIV.



Fig. 2 General view of the Rocher des Aures (1) from south, overlooking the valley of the Lez (2). (S. G. Schmid).

Rocher des Aures

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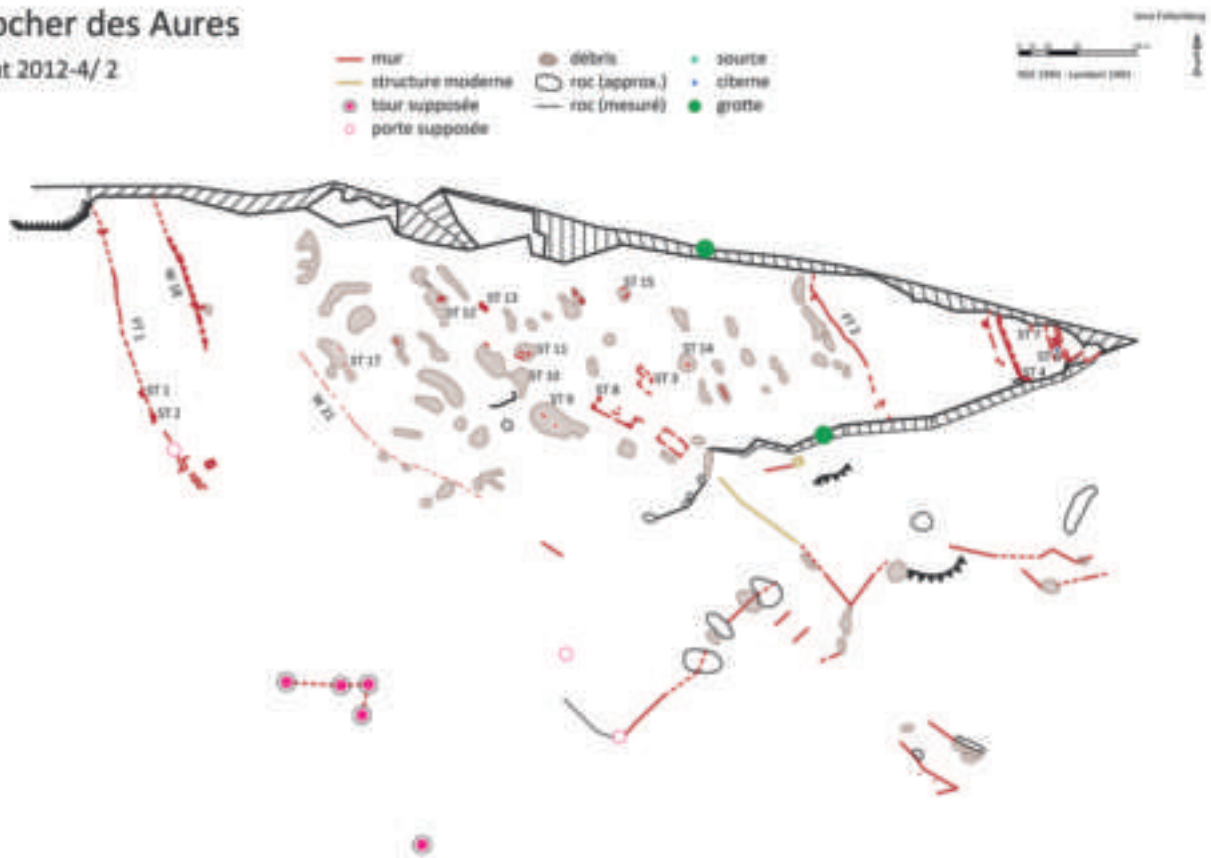


Fig. 3 Map of the Rocher des Aures with ancient structures. (J. Falkenberg).

The official discovery of the *oppidum* goes back to the years immediately before World War I, when Alexandre Chevalier discovered the fortified site and proposed to identify it with the city of Aeria, mentioned by Strabo – an identification that has been much debated since and that we shall not deal with at present.¹¹ Despite various attempts, no serious archaeological investigations took place at the site until 2011 when the *Project archéologique du Rocher des Aures* started a survey programme of the site and its neighbourhood.¹²

The Rocher des Aures is a characteristic rocky plateau of triangular shape that marks the fissured area at the foot of the Montagne de la Lance (Figs 2, 3). To the west, it overlooks the Rhodanian plain (about 30 km away) up to the Cévennes, and to the south Mont Ventoux, 37.5 km away, is clearly visible (see Fig. 7). Immediately in front of the site runs the valley of the Lez river, an important stretch of the ancient road just mentioned. Due to its characteristic prominent situation, being totally inaccessible on its upper half from all sides due to the steep cliffs, the Rocher des Aures offers a perfect site for a fortified settlement. The incline is almost 40°, which can be considered less advantageous for habitation. The site clearly was fortified on its lower and larger part by a massive wall built in a dry stone technique (FT 1 on Fig. 3; Fig. 4). The preserved parts are more than 150 m

long and the best preserved stretches still stand up to about 1 m high. The original width of this fortification must have been about 5 m and its height considerable, at least judging from the massive amount of debris that can be clearly seen from very far away and also on satellite images. It is surely no coincidence that the wall is built at the steepest point of the plateau, making any attempt to attack it very difficult. Interestingly, in its actual state of preservation, the wall shows better preserved parts more or less interrupted by stronger destroyed parts, maybe indicating a partial use of a perishable material such as wood (indicated by arrows on Fig. 4). The holes could indicate the former location of horizontal and/or vertical beams characteristic of so-called *murus gallicus* or ‘Pfostenschlitzmauer’-type fortification walls.¹³ However, such hypotheses need further in-depth investigation, i.e. proper excavation.¹⁴ Several protruding rectangular constructions could be interpreted as towers. However, they seem very small and not built into the main wall, wherefore they rather seem to be later additions. This main wall prevents access to the plateau on the only side that is not naturally fortified. Therefore, the Rocher des Aures corresponds to the fortified *oppida* of the *éperon barré* or barred spur type.¹⁵ Of course, both the construction technique as well as the general appearance would point to an Iron Age date and there are manifold convincing examples of this type of *éperon barré* in



Fig. 4 Rocher des Aures, main fortification wall. (S. G. Schmid).

¹¹ Chevalier 1920/1968, *passim*.

¹² www.auac.ch/para; Schmid 2012. For a concise overview of the site, see Planchon *et al.* 2010, 516–18, s.v. Roche-Saint-Secret-Béconne (J. Roussel-Ode).

¹³ See most recently the contributions in Fichtl 2010.

¹⁴ It is interesting to note that the technique of *muris gallicus*, typical of Northern Gaul, seems to have been used for a huge building of the 4th century BCE, possibly of a public nature, at the neighbouring site of Le Pègue (no. 37 on Fig. 1): Lagrand 1983, 13; Sergent 1998, 41–2.

¹⁵ In general on the type, see Fichtl 2005, 41–4; for a selection of other Mediterranean examples, see Chausserie-Laprée 2005, 63–104.

Southern France, as can be exemplarily indicated by the *oppidum* of Tamaris near Marseille.¹⁶ Unfortunately, so far no finds have been recorded from the area of the main fortification wall of the Rocher des Aures that could help to date its construction precisely. The inner surface of the fortified settlement measures 6.8 ha, which is quite considerable, since for example the *oppidum* of Entremont measures at its peak 3.5 ha, while the *oppidum* of Saint Blaise has a surface area of 6.7 ha.¹⁷

The first two survey seasons clearly indicated ancient remains outside the plateau, more specifically in the zone to the south of it (see Fig. 3). If they were occupied contemporaneously with the plateau itself, which still needs to be proved, the overall extension would reach almost 20 ha, a rather significant size. As the quoted parallels of Tamaris and Entremont show, *oppida* of the *éperon barré* type often had an interior wall, a kind of *diateichisma*, separating an upper city from a lower city. A similar wall also exists on the Rocher des Aures, limiting access to the upper third of the plateau (FT 2 on Fig. 3; Fig. 5). It is constructed in the same technique as the lower main fortification wall. On some stretches it even made use of larger stones and shows a more careful construction. Around this wall some sherds and other small finds were recorded. However, they all belong to

later periods, i.e. the so-called Gallo-Roman era. Finally, the top of the plateau was again separately fortified, creating a small fortress on the most easily defended part of the rock, at a height of 771 m. Clearly, this enterprise not only had a defensive but also a representative character, since even the most inaccessible parts were neatly and nicely walled, using small stones and large quantities of mortar as for all the visible walls in this part of the plateau. This, together with glazed pottery belonging to the medieval period collected at the spot, clearly indicates later activities probably transforming the upper part of the *oppidum* into one of the numerous medieval *castra* of the region.¹⁸

To gain more information about the function and the chronology of the ancient occupation of the Rocher des Aures, we have to briefly look at its interior space. Most parts of the plateau were actually covered with massively built structures, including the steepest parts (Fig. 3). In order to reduce the impressive slope from east to west through terrace walls, and/or to reinforce the security of the higher places, other massive parallel north-south walls were built, streaking the slope in a more or less regular way. One of the best preserved is located in the sector B10–D11, built in a dry stone technique. The huge amounts of fragments of pottery and roof tiles on the



Fig. 5 Rocher des Aures, intermediate fortification wall. (S. G. Schmid).

¹⁶ Chausserie-Laprée 2005, 67–70, 89–90.

¹⁷ For Entremont, see Arcelin 1987, 61; for Saint Blaise: Bouloumié 1984, 9 (indicating 5.5 ha); Py 1993, 96 (giving 6.7 ha); 5.5 ha is also given by the most recent contribution: Martin-Kobierzyki 2012, 225. See above note 1 for a short discussion as to whether size is related to the identification as an *oppidum*.

¹⁸ Estienne 2008, 30–1.

surface indicate a regular and intense use of properly roofed structures, some of them of substantial size. The best examples were located in the middle of the plateau, aligned along the same elevation line. Here, outer walls of the rectangular structures were standing to a preserved height of up to 2 m at some points. Contrary to the fortification walls mentioned earlier, these walls made intense use of lime mortar, which in the Middle Rhône valley does not seem to be in use before 80 BCE at the earliest.¹⁹ Although it would be tempting to compare the overall plan of these buildings with houses from other Iron Age *oppida* in Southern France,²⁰ and to further interpret the type of urbanism realized on the Rocher des Aures, we have good reasons to abstain from too hastily conceived conclusions. So far, the vast majority of the pottery collected belongs to the Gallo-Roman period, covering the first five centuries of the Christian era. Most finds belong to a category of pottery called gray kaolinitic ware, very widespread in the region.²¹ A few fragments of *terra sigillata*, glass and other types of pottery do confirm the general range of chronology, as do the roof tiles, at least the pieces with enough characteristic elements in order to be vaguely dated. Very few earlier sherds, from the Bronze Age onwards, as well as older reports of apparently important quantities of Iron Age pottery found on the site could indicate a previous occupation that would of course well fit the general aspect of the main fortification walls.²² From our survey activities, the few elements that possibly could point to an occupation of the site during protohistoric periods are very few sherds of Campana ware (or imitations of it), fragments of a handmade pot as well as the two major fortification walls probably built in dry stone technique.

Regional importance

If we look at the region in general, we do indeed have important Iron Age sites (Fig. 1). Certainly the best known is the *oppidum* of Le Pègue,²³ located only 7 km from the Rocher des Aures and clearly visible from there (no. 37 on Fig. 1; see Fig. 7). Although showing similar general characteristics, the indications for massive fortifications are less clear than on the Rocher des Aures.²⁴ But the Iron Age occupation is beyond doubt since the many years of excavation yielded abundant local pottery – and most importantly – significant amounts of Greek pottery of various productions and date. Most of these imports probably came through Massalia and were related to the much estimated use of drinking wine *à la grecque*, as is indicated by finds of wine amphorae of massaliote type.²⁵

If we widen our search a little further, we are immediately struck by the great number and high density of presumed fortified sites of the *oppidum* type in the region (Fig. 1).²⁶ It is clear that it is impossible to suppose that all these places should be understood as belonging to the same category of settlements and/or to the same chronological period. For instance, if we apply Thiessen polygons on all registered sites (Fig. 6),²⁷ it is obvious that almost none of them could properly function with a minimum amount of space around the settlement etc. It is also obvious that the majority of sites are not even close to the centre of their presumed living space. Indeed, we have to keep in mind that each city was functioning with a certain territory, in whose centre was a ‘capital’, a central place, uniting cult and market place, and located at the main crossroads, equidistant from its territorial borders – at

¹⁹ As stated by the analysis of the *oppidum* of Jastres, more specifically by its second fortification wall (JN2): Lefebvre 2006, 320.

²⁰ Garcia 2004, 53–101, 143–65; Chausserie-Laprée 2005, 88–139. Such rectangular structures of c. 10 m long and established parallel to the slope and the main fortification wall have also been discovered in the Middle Rhône Valley, for example in Jastres-Nord: Lefebvre 2006, 178–200, 335–42.

²¹ See, for example, Meffre 1985.

²² Reports of older finds belonging to the Bronze and Iron Ages and presumably coming from the Rocher des Aures can be found in Chevalier 1920/1968, 53–4. General studies as well as many specific cases of dry stone fortification walls can be found in Dédet & Py 1985; Garcia 2004, 137–42, as well as several articles in *Documents d'Archéologie Méridionale* 32, 2009.

²³ For a general overview, see Planchon, *et al.* 2010, 470–5, s.v. Le Pègue no. 1 (F. Sergent).

²⁴ Planchon *et al.* 2010, 472; Lagrand 1985.

²⁵ The important amount of Greek and Greek influenced pottery led some scholars even to suppose that the site was a kind of *emporion* for Massaliote traders: Hatt *et al.* 1961. The importance of banqueting and wine drinking in pre-Roman Gaul has been clearly established; from the wide selection of contributions we shall quote only a few recent publications, all with further bibliography: Brun 2009; Simón 2009; Poux 2009.

²⁶ See e.g. Serrières 2009; Sergent 1998, 28–38, figs 5–7.

²⁷ We are fully aware of certain shortcomings of Thiessen polygons when trying to understand ancient use and definition of space. However, all other models have shortcomings as well, and for our purpose, that is pointing out that we observe a far too elevated density of fortified places in the region we are dealing with, they seem to perfectly fit. For a concise discussion of various models usually applied in modern archaeological spatial analyses see Iannone 2006. For the application of Thiessen polygons in order to define the territories of Iron Age ‘Fürstentümer’ (princely residences) see Milcent 2012, 92–4.

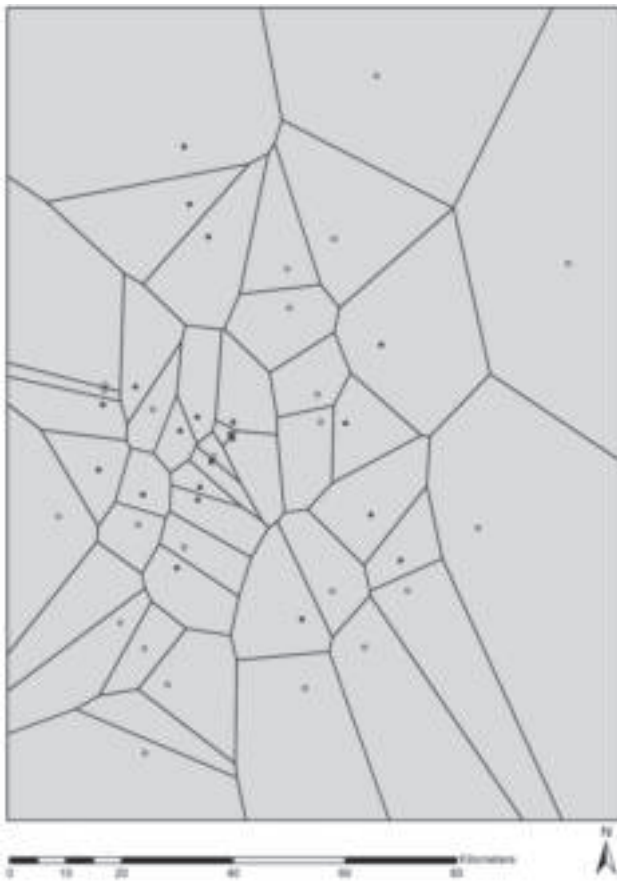


Fig. 6 Thiessen polygons applied to all *oppida* in the region under study. (W. M. Kennedy).

least this is the generally accepted model when it comes to spatial organization of protohistoric communities in this part of the world.²⁸

If we focus only on the confirmed Iron Age *oppida*, the picture gets slightly better, but we are still far from having a conclusive explanation for the function of all these sites in a common context. What we need is a hierarchy within these fortified sites, in order to distinguish main places

from secondary places.²⁹ A possible way could be through a systematic analysis of the space under the control of each settlement, using viewshed analyses.³⁰ Of course, the reality may be slightly more complicated, since more structures, such as possible watchtowers etc., should also be taken into consideration, but as a start we may give it a try. A site that in this respect would definitely belong to the highest category is the *oppidum* of Barry in the Rhône valley (no. 7 on Fig. 1), an important Iron Age town whose precise chronology and extension unfortunately remain unclear.³¹ The site overlooks a long stretch of the Rhône valley in an optimal way and further controls a good part of the plain until the Montagne de la Lance (Fig. 8), making it clearly an important central place in the area.³² Interestingly, it does not overlook the valley of the Berre which represented a major cross road from the western part of the Rhône to the Montagne de la Lance.³³ This shortcoming is compensated by the *oppidum* of Le Moulon further north that also dominates a good part of the Rhône valley and, to a lesser extent, of the plain (Fig. 9; no. 45 on Fig. 1).³⁴ Interestingly, there is direct visual contact between Le Moulon, Barry, the Rocher des Aures and Le Pègue. Le Moulon shows an expanding series of oval and more or less rectangular fortification walls covering a total surface area of 22 ha, all built in dry stone technique equal to the wall of the Rocher des Aures. Material found during excavations revealed an important Iron Age phase of the 7th–6th centuries BC and a second concentration of material during the 1st and 2nd centuries AD.

Other sites show a very different picture in terms of visibility. The *oppidum* of Château Porcher for example offers a splendid control of the Rhône valley but a much reduced view towards the hinterland (Fig. 10; no. 13 on fig. 1).³⁵ At least from a first impression one could conclude that this site was a kind of category B settlement, controlling the Rhône valley and depending from another major site. A similar interpretation could fit for sites such as the *oppidum* of Les Puys (Chamaret)

²⁸ On these 'endroits souverains', see Jullian 1908, 59–60; Fiches 1979; Arcelin 1984, 194–5; more generally on the model of central places see Nakoinz 2009; at least for the southern part of France and for the Late Iron Age/Early Roman period, these models work out quite well: Verdin 2002; Verdin 2006, *passim*, especially 246–7. Unfortunately, the area we are dealing with is not considered in these publications; cf. Planchon & Tarpin 2009 for a discussion, although without the use of spatial analysis.

²⁹ Buchsenschutz *et al.* 1993, 250–2 already proposed that *oppida* with a larger surface area (in comparison with their neighbours) may indicate a certain hierarchy between these sites.

³⁰ The same combination – Thiessen polygons and viewshed analyses – has been applied to Iron Age sites on the Iberian peninsula in a similar study: Dytchowskyj *et al.* 2005.

³¹ Rouméguis 2009, 145–8, s.v. Bollène no. 1.

³² On this subject, see Odier 1991, 60–3 and *passim*.

³³ Jung 2009, 108 no. 21.

³⁴ On the site, see Sergent 2009; especially for the strategic importance, see also Odier 1991, 63–5 and *passim*; in general cf. Planchon *et al.* 2010, 525–6, s.v. Roussas (M. Bois).

³⁵ On the site, see Odier 1991, 65–6; Planchon *et al.* 2010, 214, s.v. Châteauneuf-du-Rhône (M. Bois).

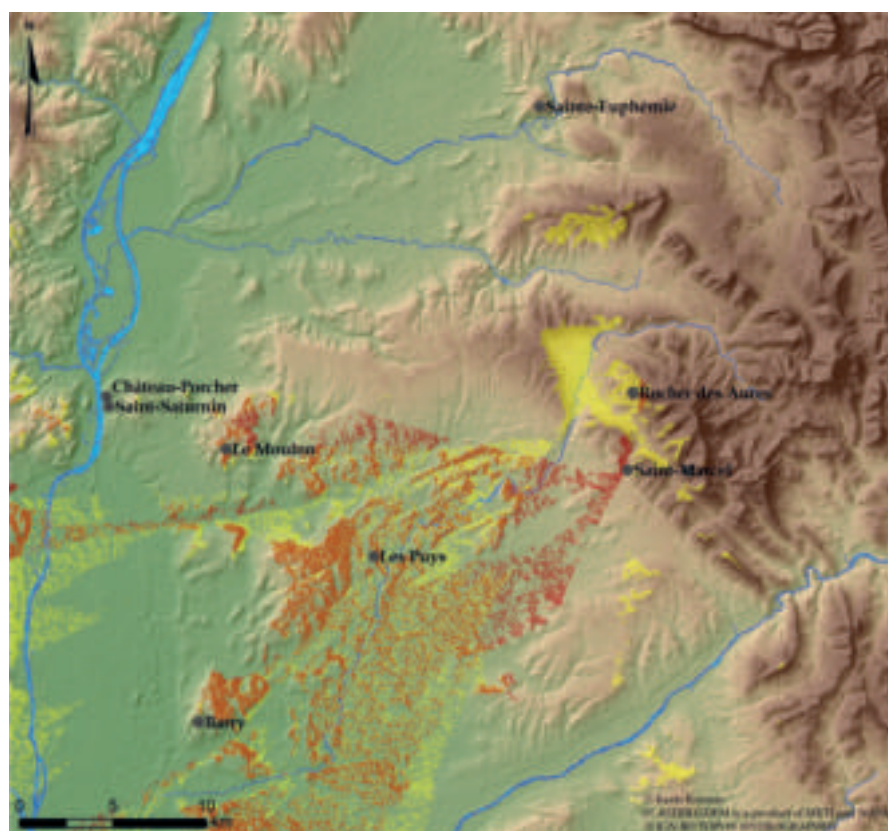


Fig. 7 Viewshed analysis for Rocher des Aures (yellow) and Le Pègue (orange). (K. Kermas using ASTER data).

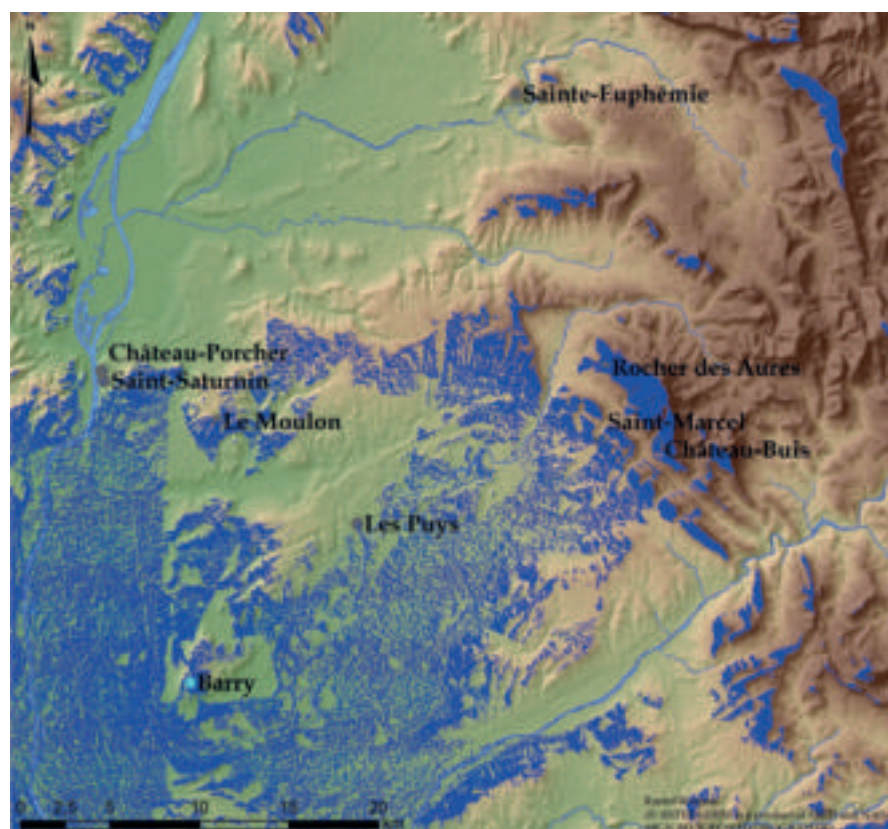


Fig. 8 Viewshed analysis for Barry. (K. Kermas using ASTER data).

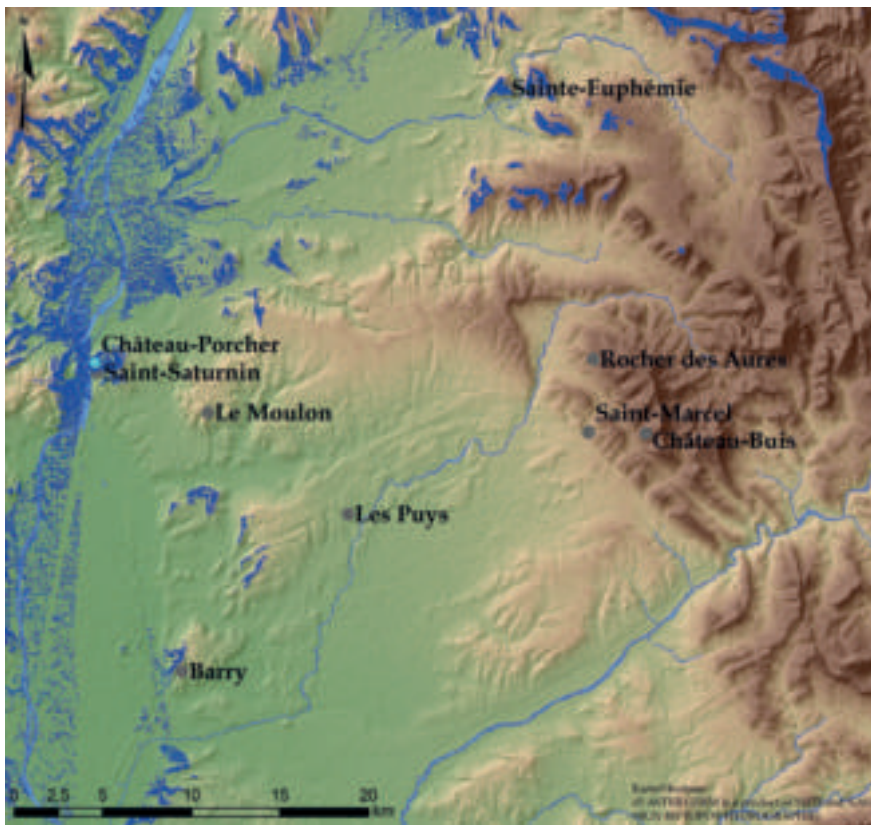


Fig. 9 Viewshed analysis for Le Moulon. (K. Kermas using ASTER data).

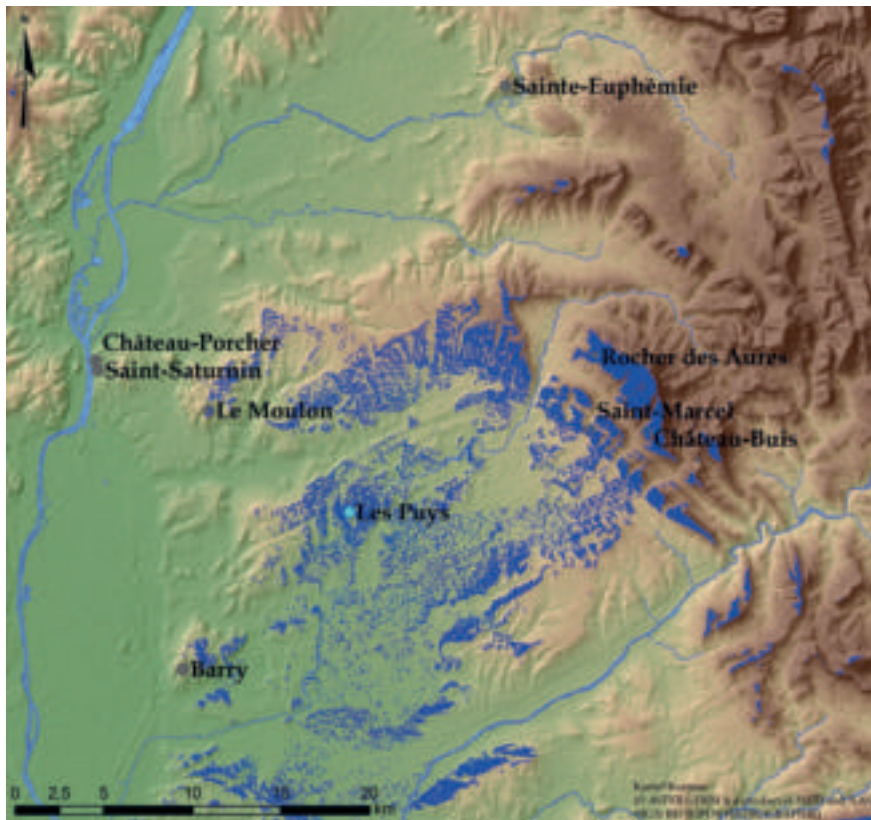


Fig. 10 Viewshed analysis for Château Porcher. (K. Kermas using ASTER data).

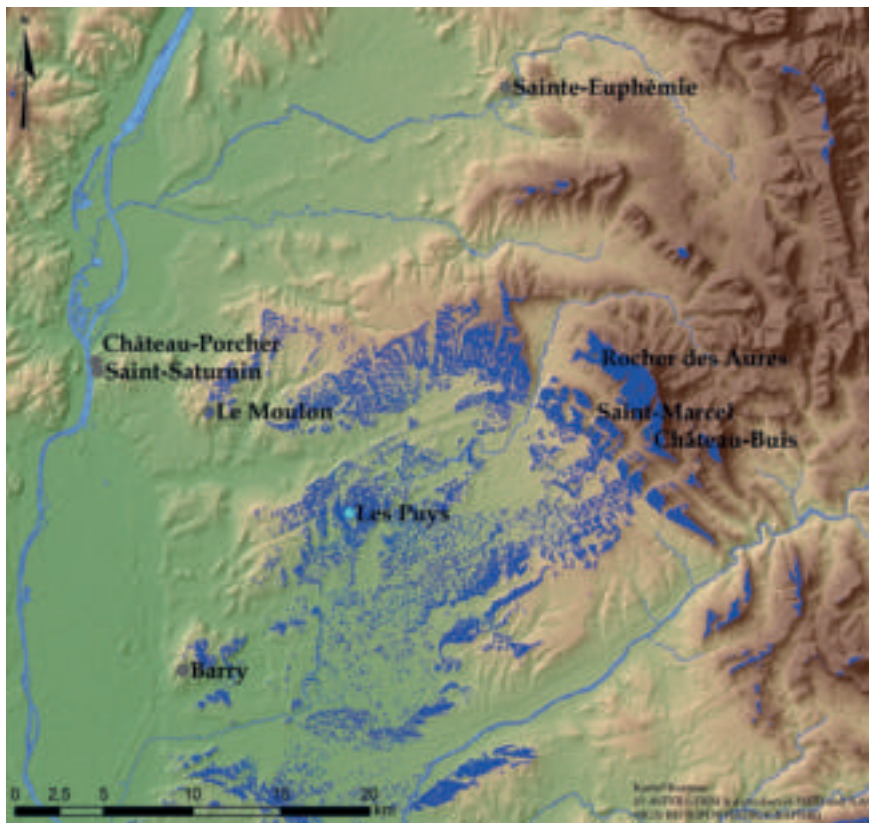


Fig. 11 Viewshed analysis for Les Puys. (K. Kermas using ASTER data).

(Fig. 11; no. 23 on Fig. 1).³⁶ Although located in the centre of the plain between the Rhône valley and the Montagne de la Lance, the place has a more reduced view compared to Barry or Le Moulon and does not even oversee the important communication road close by in the valley of the Berre. It is difficult to imagine that such an *oppidum* could have been a real central place.

Looking again at the overall map, the impression given is that there is a first row of sites, no matter whether they belong to the same political or tribal entity, which clearly is meant to control the Rhône valley, placed strategically every 10 km or so (nos 1–4, 16, 17 on Fig. 1).³⁷ While some of them might have been exceptional settlements, others could just have functioned as border posts, simple commercial relays/counters, market places, or toll stations of the great Mediterranean port, i.e. allies of Massalia.³⁸

A next series of places could easily protect the proto-historic alternative road we have already mentioned several times on the stretch from Vaison-La-Romaine to the valley of the Lez (nos 28–33, 35–42 on Fig. 1), while it would make perfect sense for a third group to overlook traffic on the crossroads connecting these two axes, in our case especially along the valley of the Berre (Le Moulon, Valaurie, Réauville, Grignan), and then following the valley of the Lez and possibly reaching Le Pègue (nos 11–14, 45–7, 23–6, 37, 38 on Fig. 1).³⁹ A last group of *oppida* almost forms a line across the plain, along the Lez valley (Suze-la-Rousse, Chamaret, Grignan and Beauregard [Grignan]), which suggests an organized appropriation of this territory, structured in different parts (nos 18–26 on Fig. 1). It remains unclear if this line, probably following an ancient road, might also have materialized a border.⁴⁰

³⁶ Planchon *et al.* 2010, 203–4, s.v. Chamaret (M. Bois).

³⁷ According to Boissinot 2009, 71 and fig. 24; similar observations as to the distribution and function of fortified places in the Tricastine plain were made by Boisse 1968, 46–50.

³⁸ On this topic, see Meffre 1993; Tarpin 2007; Segard 2008; Jourdain-Annequin 2011.

³⁹ In the plain at the end of the Berre valley, the site of Novem Craris (Logis de Berre), occupied during the whole Iron Age, is also located along this road, more precisely at its crossroad with the *via Agrippa*: see Sergent 1998, 37, 48. On this itinerary see also Jung 2009, 108 (no. 21).

⁴⁰ Sergent 1998, 38. This ancient road linked the left bank of the Ardèche with Grignan, passing through Barry: Jung 2009, 109 (no. 24).

Although there may have been many other paths and ways already in pre-Roman periods, we are struck by this situation. If we remember that it is somewhere in this region that we should expect the border between the territories of the Cavarii and the Vocontii, maybe these sites can be understood as having a function to protect these limits. This does not mean that they actually have to mark the limits of the territories properly, but control them; the actual limits can be further away. In this region, at least from the 3rd century BC onwards, diverse political entities are attested: the Vocontii (east), the Tricastinii (north-east) and the Cavarii (west and south). Numerous tribes were apparently part of a kind of ‘confederation’,⁴¹ which was most likely the case of the Tricastinii, under the authority of the Cavarii; the Cavarii were allies of Massalia and had other tribes or communities as clientele. From the epigraphic data of the Orange B cadastre, it has been suggested, and followed by many scholars,⁴² that the Tricastinii occupied the mountainous areas above the Tricastine plain, between Lez and Jabron rivers, the plain itself being under the control of the Cavarii, whose authority extended to the confluence of Rhône and Isère. It is also considered that the protohistoric axis (para-Rhodanian road) corresponds to the demarcation line between the territories of the tribes and confederations controlling the plain and the ones on the hills, or in other words between Cavarii and Vocontii.⁴³

Again, we face the fact that the area we are interested in, with the *oppida* of the Rocher des Aures and Le Pègue, is situated in a border zone. But to which part do they belong, to the territory of the Cavarii (Tricastinii) or to the territory of the Vocontii? Before coming back to this point, we have to consider yet another question. Clearly, the Rocher des Aures and Le Pègue were important sites and they had to function contemporaneously at least for

some time, even if further investigation would not reveal more Iron Age material from the former. Therefore, we should try to explain this very close existence of two major sites. It is obvious that the Rocher des Aures perfectly controls important stretches of both, the north-south connection between the Rhône valley and Massalia – especially the important passage through the valley of the Lez – as well as the east-west crossroad in the valley of the Berre (yellow on Fig. 7). However, one is struck by the absence of visibility overlooking almost half of the plain to the south including the part of the protohistoric path leading from the south-east (Nyons) to the valley of the Lez. This is precisely the part that is completed by Le Pègue (orange on fig. 7). Therefore, it would seem preferable, at least for the time being, to propose a complementary function for the two sites rather than a concurrent one. Furthermore, besides purely strategic arguments, aspects of representation and visibility from a distance may have played a role, some of the *oppida* being meant to literally shape the landscape and function as ideal refuge places or places of resistance, and some had a superior function, as suggested by a passage in Caesar.⁴⁴ This reveals at least a certain organization of the pre-Roman agglomerations, and the existence of a central *oppidum*, more important than the others, considered as the capital of a *civitas*, often a very large and well-fortified place, and secondary *oppida*, controlling the diverse *pagi* composing the *civitas*. Caesar also contributes to the question of hierarchy, quoting other settlement types: *aedificum*, *vicus* and *castella*, usually considered as farms, villages and hill-forts, the last being comparable to *oppida* but of smaller size, with a military function and sometimes possible permanent settlement, in relation with the control of natural resources and production sites.⁴⁵ This brief presentation confirms that the question of the interpretation and function of the Iron Age settlements in our region has to be considered

⁴¹ The term itself has no ancient correspondence and is discussed controversially: Planchon & Tarpin 2009, 77–9; Planchon 2010, 114.

⁴² Barruol 1969, 234; Chastagnol 1980. For a general presentation of the different limits proposed, see Sergent 1998, 16–20, for whom, contrary to Barruol, the villages of La Roche-Saint-Secret and Le Pègue correspond to the north-eastern limit, and are therefore considered as Tricastine.

⁴³ Chapotat 1981, 90.

⁴⁴ Indeed, the Aduatuci for example, once informed about the defeat of the Nervii that they wanted to help (in 57 BCE), returned home and ‘deserting all their towns (“*oppida*”) and forts (“*castellan*”), they conveyed together all their possessions into one town, eminently fortified by nature. While this town had on all sides around it very high rocks and precipices, there was left on one side a gently ascending approach, of not more than 200 feet in width; which place they had fortified with a very lofty double wall: besides, they had placed stones of great weight and sharpened stakes upon the walls’: Caes. Gal. 2.29 (Harper’s New Classical Library, translation W.A. McDevitte & W.S. Bohn, 1869). For the study of this phenomenon, see Fichtl 2005, 143–5; cf. above note 1.

⁴⁵ For the examples of the role of Genabum, Avaricum and Gergovia, see Caes. Gal. 7.11.15, 36, and also Jullian 1908, 60–1; Fichtl 2005, 166–70.

hierarchically and chronologically. It seems clear that there must have been a certain hierarchy within *oppida*.⁴⁶

The strategic importance of the crossing of the two roads at the entrance (or exit) of the valley of the Lez can be further underlined. When looking at models in order to understand the logical communication axes in the area, we may get some additional hints, using cost-path-analyses.⁴⁷ Indeed, when connecting a representative sample of the ancient sites of a region into a triangular irregular network, it becomes obvious that an important cluster of sites in the south will be connected through the valley of the Lez to an important cluster of sites in the north. Whoever wished to go from Taulignan to Dieulefit or from Vaison-la-Romaine (*Vasio Vocontiorum*, no. 31 on Fig. 1) to Die (*Colonia Dea Augusta Vocontiorum*), the two capitals of the Vocontii in the Roman period,⁴⁸ had to pass through the narrow valley of the Lez, controlled by the Rocher des Aures and Le Pègue. Other connections would have been possible, but using more effort and cost. It is precisely this argument that, most probably, allows deciding to which political entity the sites of Le Pègue and Rocher des Aures once belonged: it would be hard to believe that the easiest connection between the two capitals of the Vocontii, the one located in the plain, the other in the mountains, should pass through territories that were not controlled by the Vocontii themselves. Therefore, our two sites (Rocher des Aures and Le Pègue) quite surely belonged to the Vocontii, although their territorial limits remain unclear. We must remember that territorial borders in general were not so precise at that time,⁴⁹ and that the information given by historical sources about peoples and their territories is sometimes confusing, mixing up sources referring to the pre-Roman and the Roman periods.⁵⁰ While Barruol and others consider the *pagus Aletanus*, attested by inscriptions, with Le Pègue and the Rocher des Aures, as part of the *civitas* of the Tricastinii,⁵¹ Mège and others after him make it part of the *civitas* of the Vocontii.⁵²

Conclusion

The reflections we made so far have tried to show how the *oppidum* of the Rocher des Aures fits into the regional landscape of the Iron Age and Roman period. One of the main questions related to the place and the region is the tribal and political entity to which it could have belonged in Antiquity, without being necessarily the same over the periods concerned. Trying to sum up, with the results obtained so far by our research, two elements would rather point in favour of an affiliation to the Vocontii:

1. The visual control of both sites, Rocher des Aures and Le Pègue, is clearly oriented towards the plain (Fig. 7); they have absolutely no control of the hills and mountains at their back, surely under the authority of the Vocontii. If these would be the easternmost outposts of the Tricastinii, they would be useless in the sense that they would offer no insight to the territory of the Vocontii but only into their own territory. If, on the contrary, these are the westernmost outposts of the Vocontii, they are situated on perfect locations, offering an excellent visual control of the border zone and deep into the 'enemies' territory. Since the mountains at their back belong to their own territory, they do not need to look into it.
2. The cost-path-analyses between the southern and northern nuclei of the established territory of the Vocontii showed that one of the most important connections between them was the road leading from Vaison-la-Romaine to Nyons, Le Pègue, into the valley of the Lez with the Rocher des Aures and further in direction towards Dieulefit, Aouste, Saillans and so on. It makes no sense to suppose that this route should lead through territories under foreign control. Therefore, the *pagus Aletanus* should be considered as belonging to the Vocontii.

⁴⁶ This general aspect has already been pointed out by Fichtl (amongst others), who supposes different categories of fortified *oppida*, depending on their function, and also underlines the fundamental differences, in size, architecture and history, between Mediterranean and non Mediterranean *oppida*: Fichtl 2005, 19–20; cf. above note 1.

⁴⁷ For some examples of using least cost-path-analyses in archaeology see Verhagen *et al.* 2011.

⁴⁸ On these two sites and other agglomerations of the Vocontii, see Segard 2008; Segard 2009, 66–8; Planchon 2010, 114–15.

⁴⁹ It is generally supposed that during the Iron Age, the tribes did not have fixed names and borders, but constituted some kind of 'mosaïque hétérogène d'entités aux contours plus ou moins nets', often remodelled and without a superior administration. Stable entities and borders are a phenomenon which can only be attested from the Roman conquest onwards and which lead to the (re)territorialization of indigenous populations, sometimes modifying the hierarchy or status of the settlements (in our case cf. Boissinot 2009, 74). The problems related to this traditional approach have recently been pointed out by Vial 2011, dealing with the case of the Volques Arecomices. On 'fuzzy borders' in Antiquity, see also Fless & Esders 2011.

⁵⁰ On this specific problem regarding the territory of the Vocontii: Planchon & Tarpin 2009, 78.

⁵¹ Barruol 1969, 266–7; Chastagnol 1980.

⁵² Mège 1986; Desaye 1999, 19–22.

This may be a first clue to a better understanding of control of the territories related to *oppida* in the southern Drôme, although there still remains a lot of work to be done regarding the chronology, the proper status of the *oppida* and their relations within each other.

List of *oppida*

List of *oppida* illustrated in Fig. 1. Archaeologically confirmed *oppida* are typed in normal letters, supposed *oppida* in italic letters. Different groups of *oppida* are indicated corresponding to strategic locations and functions. In some cases, an *oppidum* can belong to more than one group.

Group 1 (along the Rhône)

1. Roquemaure
2. Lampourdier (Orange)
3. Saint-Eutrope (Orange)
4. Piolenc
5. Cantarelle (Mornas)
6. Jouanades (*Mondragon*)
7. Barry (Bollène)
8. Saint-Etienne-de-Dion
9. *Saint-Paul-Trois-Châteaux*
10. *Pierrelatte*
11. *Donzère*
12. Saint-Saturnin
13. Château-Porcher (Châteauneuf-du-Rhône)
14. *Malataverne*
15. *Marsanne*
16. *Mirmande*
17. *Loriol-sur-Drôme*

Group 2 (in the plain between the Rhône and the hills)

18. *Rochebude*
19. Suze-la-Rousse
20. *La Baume-de-Transit*
21. *Montségur-sur-Lauzon*
22. *Everunnes (Chamaret)*
23. Les Puys (Chamaret)
24. *Roustan (Grignan)*
25. *Grignan*
26. Beauregard (Grignan)

Group 3 (along the para-Rhodanian and other secondary roads)

27. *Vénasque*
28. Courrens (Beaumes-de-Venise)
29. *Malaucène (Clairier)*
30. *Séguret*
31. Vaison-la-Romaine

32. Châtelard (Mollans)
33. *Mérindol-les-Oliviers*
34. Sainte-Luce (Vercoiran)
35. *Saint-Jaumes (Mirabel-aux-Baronnies)*
36. *Château-Buis (Rousset-les-Vignes)*
37. Saint-Marcel (Le Pègue)
38. Rocher des Aures
39. *Vesc*
40. Les Gettes (Eyzahut)
41. Sainte-Euphémie (Pont-de-Barret)
42. Six sacs (Saou)
43. Luc-en-Diois
44. *Plan-de-Baix*

Group 4 (along the valley of the Berre, between the Rhône and the hills)

45. Le Moulon (Roussas)
46. *Valaurie*
47. *Réauville*

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THE CITY WALLS OF THE ANDRIAN COLONIES: TRADITION AND REGIONALISM IN MILITARY ARCHITECTURE*

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Abstract

By studying the fortifications of the colonial cities of the island of Andros, this article aims to demonstrate the presence of architectural phenomena unique to the northern region of Greece between the Nestos and the Axios. The first of these phenomena is represented by the so-called Ladder-pattern masonry. This architectural method, found mainly in the Cyclades and Attica, is differentiated, in this limited area, by its aesthetic and cultural functions rather than the economic and practical properties that were at the origin of the technique. The second phenomenon to be found in this northern region is the combined use of Ladder-pattern and Lesbian masonry within the same wall. These architectural methods were only known in certain regions and the north of Greece seems to be the only place where they overlap and were used during the same period in the same fortification. This unique occurrence can be explained by two separate population movements that took place in the Archaic period. The colonization of northern Greece by certain Cycladic islands and the displacement of populations from eastern Greece are both events that influenced the defensive characteristics of northern Greek cities.

Introduction

From the 8th century BC onwards, Greek colonists originating mainly from the islands of Euboea, Paros and Andros, established a large number of colonies along the western coast of the northern Aegean. The Andrians founded four colonies, all established around the middle of the 7th century BC:¹ three along the eastern coast of the Chalikidiki peninsula; Sane, Akanthos and Stageira, and the fourth one, Argilos, just a few kilometres west of

the Strymon River. On an architectural level, the plan of the houses excavated at these sites does not correspond to a particular Cycladic style, since Greek domestic architecture varies considerably from one city to another or from one region to another. However, the techniques of masonry used by settlers in their architecture could reflect the Cycladic origin of the colonists. This may be the case with some of the colonies of Andros, especially in the building of their fortification and terrace walls, which leads us to believe that architectural building

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¹ On the Andrian colonization, see Tiverios 2008, 52–66; for Argilos, Perreault & Bonias 2010, 225–33; Liampi 2005, 58–100.

technique can reflect a cultural unity. The type of masonry in question is the 'Ladder-pattern', also known by some archaeologists as the 'stack-work' technique. This building method uses large blocks and small rectilinear slabs in the same course. Intentional interstices between larger blocks were filled with slabs placed horizontally in a characteristic stack-work.² When used in fortifications, this method was only applied on the faces of the walls and not in the core of the structure. This technique, we will see, is present in the Cycladic islands as well as in northern Greece, but it exists in several variants, which may be linked to a chronological development and may indicate the presence of a confined phenomenon in northern Greece. In this paper we will address three questions: that of cultural unity between Andros and its colonies, represented by the so-called Ladder-pattern technique; the transformation of the Ladder-pattern from a technique to a style; and the question of architectural regionalism and/or confined phenomenon, since a close study of the Andrian colonies fortification systems illustrates the existence of some regional characteristics.

With the exception of Sane, where the results of excavations have not yet produced evidence of a defensive wall, we have relatively accurate information for the walls of the other Andrian colonies.

Stageira

Stageira's fortification is one of the best known in northern Greece. The meticulous work of the architects is impressive, and may in part explain why certain sections are preserved so well, with remaining walls reaching a height of up to four metres.³ The large-scale excavations have uncovered three defence systems belonging to the Archaic, Classical and Hellenistic periods.

During the Archaic period, the walls of Stageira most likely only included the northern hill of the peninsula, where the first colonists settled. In order to protect their newly acquired land, Andros settlers probably built the walls quickly after their arrival in the middle of the 7th

century BC. Masonry of the Archaic wall is irregular, composed of stones of various sizes. Archaeologists also unearthed a door and a marble floor that may have belonged to the main entrance of the Archaic city. Although this data is important to understand the Archaic city, very few remnants of this wall are visible today (15 metres). Excavations show that the alignment of the Archaic wall, with a thickness of two metres, was later used as the foundation of the Byzantine fortification.⁴

Contrary to the Archaic wall of Stageira, the fortifications from the early 5th century BC are well preserved and encompass almost the entire peninsula.⁵ The most impressive and best preserved defensive remains from this period are situated on the south hill. This wall corresponds to the most prosperous period of the city, which spanned almost two hundred years. The south wall, with a thickness of about two metres, encloses a small triangular acropolis, and is characterized by four defensive towers and a small postern and is composed of two well-defined architectural styles. On the northern part of the south hill, part of the same fortification leans against the slope and appears to link the two hills. The remains of this fortification are also visible on the eastern and western slopes.⁶ The two architectural styles represented here are Lesbian and Ladder-pattern masonry. I shall discuss this combination below.

The last wall built dates to the years immediately following the destruction of the city by Phillip II. after which Stageira decreased in size and population. This would explain why they abandoned the portion of the wall alongside the coast and built a new one higher up on the hillside.⁷ This wall reached a length of 140 metres; it is 1.8 m thick and was built with irregular masonry.⁸

Akanthos

Ancient Akanthos is now partially under the modern village of Ierissos. Unlike Stageira, we do not have much information on the fortification and the extent of the defences of the city. We know that the acropolis was not far from the coast, and that it overlooked the sea and the

² For an accurate overall description of the Ladder-pattern building method, see Cambitoglou *et al.* 2001, 70–1.

³ See Sismanidis 2003, 24.

⁴ Sismanidis 2003, 62–3.

⁵ For an in-depth description of each wall and a comprehensive bibliography of archaeological findings refer to the work of Konstantinos Sismanidis 2003.

⁶ See Sismanidis 2003, 20–1, fig. 13.

⁷ Sismandis 2003, 73–5.

⁸ See Sismanidis 1992, 457–60.



Fig. 1 Fortification wall on the Kastro of Akanthos (author's photo).



Fig. 2 Fortification of Argilos (author's photo).

impressive cemetery.⁹ It is also important to note that the acropolis does not consist of one hill, but three. The remains of the wall, sometimes from different periods, were found on each of the three hills.¹⁰ Unfortunately, there has never been a detailed study of the walls, and conclusions derived from Trakosopoulou's reports are hardly convincing. She dates the wall on the Kastro, solely by its architectural style, to the Archaic period, which is somewhat problematic (Fig. 1).¹¹ We think that Trakosopoulou assumes that the Thracians inhabited the hill during the Early Iron Age, and that the Greeks initially established their colony in the same area, after expelling the local population. This would explain the early date attributed to this part of the fortification. But a close examination of the wall, whose remains are 30 m long and 8 m high in some places, does not seem to corroborate Trakosopoulou's dating. Although it is very difficult to date a wall solely by its appearance, the rampart of the Kastro wall is built in an isodomic ashlar style, similar to the 'header-and-stretcher' style, which is characteristic of many Hellenistic walls.¹² So even though there is a lack of conclusive evidence to date the Kastro wall, we prefer to place its construction in the middle of the 5th century BC, or possibly in the 4th century BC, but certainly not during the Archaic period.

The wall on the south hill of Akanthos was associated with the end of the Classical period or the beginning



Fig. 3 Fortification of Akanthos on the south area of the site (author's photo).

of the Hellenistic period by its excavators. Once again, the dating of these walls is not supported by concrete archaeological evidence, but rather on a theory of the expansion of the city.¹³ However, during the excavation of the south-east wall, archaeologists uncovered walls belonging to an Archaic house. This discovery demonstrates that the hill was occupied very quickly and perhaps even by the original settlers from Andros.¹⁴ This early occupation may help us in our dating of this part of the fortification. The architecture of the

⁹ See Hansen & Nielsen 2004, 823–4.

¹⁰ See Trakosopoulou-Salakidou 1996, 300, fig. 2.

¹¹ Trakosopoulou-Salakidou 1996, 298–9.

¹² See Winter 1971, 81.

¹³ See Papagelos 1993, 1157–8.

¹⁴ For the Archaic house, see Trakosopoulou-Salakidou 1996, 300–1.

south-east wall and its deployment on the acropolis is virtually identical to those found in the mud-brick walls of Argilos, which date from the mid-6th century BC (Fig. 2).¹⁵ The fortification of Akanthos, especially the socle that survived, has a long flat surface which could be used to receive a mud-brick upper structure, as was the case at Argilos (Fig. 3).¹⁶ We can observe this type of work in

the southern part of the site where excavations have revealed a part of the wall and a tower that have been precisely levelled horizontally. Another feature that is common to both sites is what could be called a 'staircase technique' used in the building of the foundations, also present in other examples of brick fortifications, such as Apollonia of Illyria (Fig. 4b).¹⁷ This method is used when

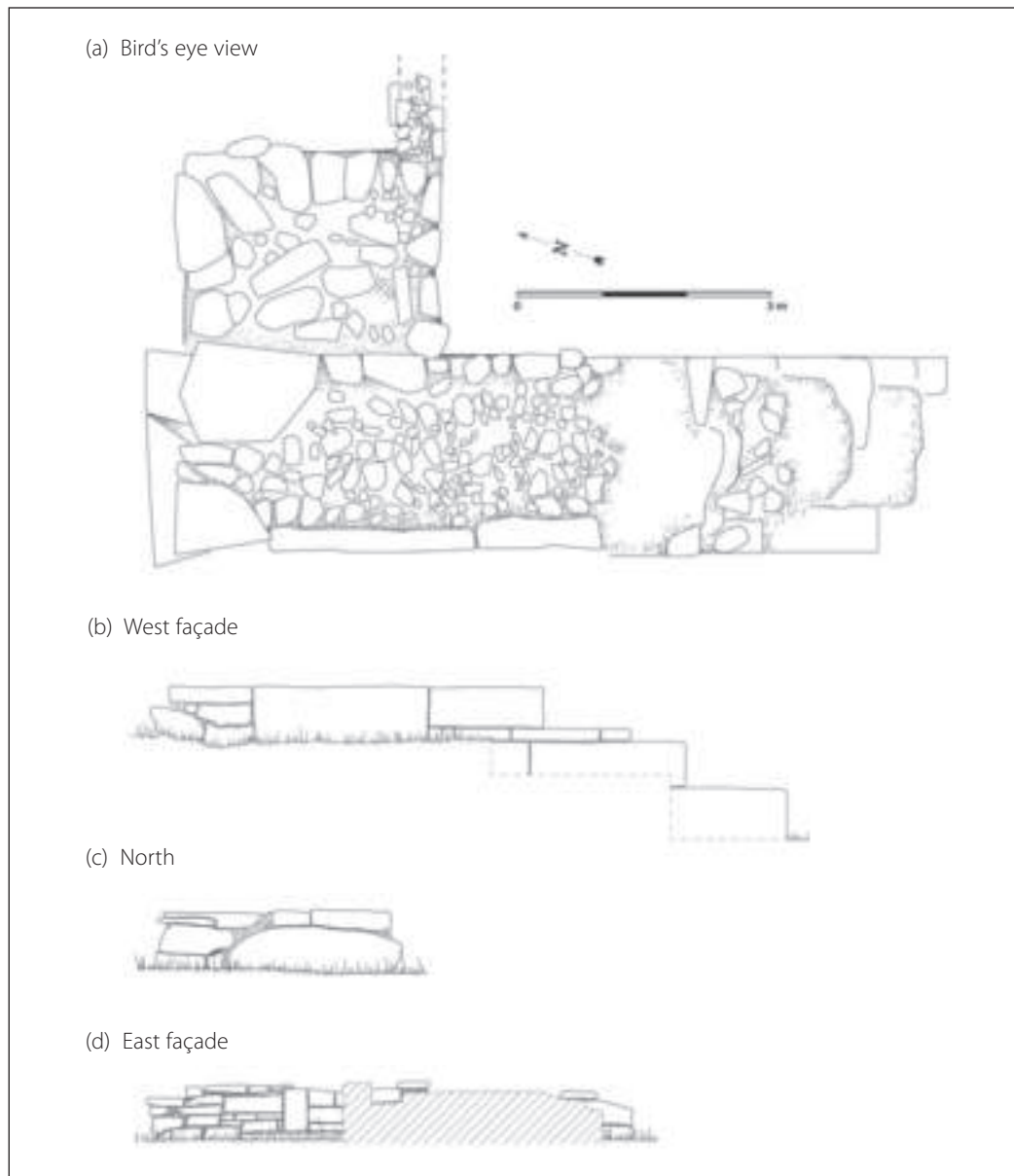


Fig. 4a–d Fortification of Argilos (F. Gignac, A. Perreault & K. Ouellet).

¹⁵ See Ouellet 2011.

¹⁶ Trakosopoulou-Salakidou 1996, 308, fig. 6.

¹⁷ Cabanes 1986, 134, fig. 18.

builders have to cope with the natural slope of a hill. Like Argilos, the exterior wall is composed of large rectangular stones and the interior façade is made of many different stones of modest size.¹⁸ The interior filling consists of a mixture of small stones and earth. Although we cannot precisely date the Akanthos wall, it is difficult to ignore the resemblance to those of Argilos, which, as just noted, date to the Archaic period. In any case, it seems clear that this wall is earlier than the one on the Kastro.

Finally, a wall to the west of the Kastro caught our attention during a visit in 2012 (Fig. 5). It was used during the Byzantine period as a terrace wall in relation with a church. But its thickness of 1.81 m and strategic position on the hill suggests that it may originally have been used as part of a fortification, rather than a terrace wall. It was built using a Ladder-pattern technique, but this is not enough to prove its earlier Greek origin, since we know that Byzantines later used the same stack-work building method replacing the stone with tile. The same building method was used in the small church of Akanthos. The interpretation of this wall is a challenge as it can clearly be seen that the bottom part is made of the Ladder-pattern technique filled with a stack-work of stone and the higher part has almost the same kind of treatment except that the interstices are filled with tiles. The initial interpretation could be to date the lower part as Greek and attribute the higher reconstruction to the Byzantine occupation. Yet since the differences between the two

parts of the wall are slight, further excavation would be necessary before attributing a date to these finds.

Argilos

The remains of the fortification of Argilos were only found by the seashore, in the south-west area of the site. Excavations revealed part of a wall (mid-6th century BC), preserved at a length of 7.62 m. Recent cleaning of the southern extremity of the wall showed that it continues towards the seashore. Some recurring elements of mud-brick fortifications are present in the wall of Argilos, such as the horizontally levelled surface and the use of large rectangular devices on the exterior of the socle. These large flat blocks are on average 2 m long by 0.85 m high with a thickness of 0.31 m. The internal façade differs from that found on the outside. The masonry is uncoursed and irregular, but some rectangular blocks are present and give the surface a robust appearance. Its thickness is 2.31 m on average and an access to the rampart is to be found on the north-eastern part of its foundation (Fig. 4).¹⁹

The likely use of adobe in Akanthos and Argilos raises many questions about its use throughout northern Greece. It is interesting to note that no site between Argilos and the Evros River to the east built its fortifications



Fig. 5 Wall on the west side of the Kastro (author's photo).

¹⁸ Trakosopoulou-Salakidou 1996, 300–1.

¹⁹ For a complete description of Argilos wall, see Ouellet 2011.

with mud-brick. On the other hand, we know of at least two sites west of Argilos and Akanthos that used this technique: Olynthos and Vrasna.²⁰ Could this be attributed to a transfer of knowledge between Andros and her northern colonies? Probably not, since mud-brick fortifications are unknown in the Cycladic islands. We may thus have here an example of ‘regionalism’ in Greek building techniques, that is to say that the use of mud-brick is isolated in this small region but is not exclusive to the Greek world. It is also interesting to note that the use of mud-brick is attested in the domestic architecture of this area.

The use of mud-brick in the walls of Argilos does not preclude the use of the Ladder-pattern in certain parts of the fortification. For example, the stone-built entrance to Avenue A in Olynthos uses this architectural method, despite the fact that the rest of the fortification is built with mud-brick. However, no such evidence has yet been found in the remains of the fortification of Argilos. That being said, a wall perpendicular to the Argilos fortification, which is attached to the access point of the rampart, is built with the Ladder-pattern technique (Fig. 4a). It is impossible to attribute a military function to this wall, but it is important to note its relationship with the fortification. The only other example of this treatment in Argilos is the imposing ‘L’-shaped terrace

wall uncovered in the south-eastern sector of the site (Fig. 6). Its construction was carried out carefully and it is remarkable to see its resemblance to the walls of the fortification of Stageira, Thasos²¹ and Torone.²²

Andros

On the island of Andros, three major excavations have taken place, Zagora, Hypsili and Palaeopolis. Of these sites, Zagora and Hypsili are dated to the Geometric period. Hypsili remained occupied during the 7th century, but on a lesser scale.

The two major defensive walls found on the island are those at Zagora and Hypsili, but these were built well before the colonization movement and much earlier than the earliest attested use of the Ladder-pattern.²³ As regards the fortification of Palaeopolis, only parts of it, dating to the 5th century BC, have been uncovered and they do not use the Ladder-pattern technique, but we know that the Ladder-pattern existed on Andros.²⁴ A large-scale surface survey done by Lydia Palaiokrassa-Kopitsa identified a number of terrace and house walls built with this technique at Palaeopolis.²⁵ Unfortunately, she was unable to date them but we shall see below that



Fig. 6 Terrace wall in the south-east sector of Argilos (author's photo).

²⁰ For the fortification of Olynthos, see Robinson & Graham 1938, 40–1; for the fortification of Vrasna, see Adam-Veleni 1992, 421.

²¹ For an updated study on the fortification of Thasos, see Grandjean 2011.

²² For Torone, see Cambitoglou *et al.* 2001, 70–1, fig. 5a.

²³ For Hypsili's walls, see Televantou 2008, 29–34; for Zagora's walls, see Cambitoglou 1988, 53–62; for the earlier attested Ladder-pattern masonry, see note 34.

²⁴ For Andros' 5th-century BC walls, see Sauciuc 1914, 10–16.

²⁵ For images of Ladder-pattern walls at Palaeopolis, see Palaiokrassa-Kopitsa 1996.

the Ladder-pattern is also well attested in other Cycladic islands, a fact that prompted John Camp to suggest that this technique originates from the Cyclades.²⁶

The Ladder-pattern: an example of cultural unity between colony and mother-city

With the exception of Samos, where the Ladder-pattern technique is attested in at least one of the towers,²⁷ the Cycladic region, the east coast of Attica and the northern coast of the Aegean between the Nestos and the Axios (including the island of Thasos) are, according to researchers, the only regions that have used this type of masonry in any kind of structure.²⁸ But we have just seen that the use of the Ladder-pattern technique had a wider distribution than the publications lead us to believe. The reason is that most researchers discussing this technique put an emphasis on fortifications and not on domestic architecture, thus ignoring many sites where the technique is used in dwellings or terrace walls. Its use in these types of structures is not surprising since the Ladder-pattern technique is a very economical and accessible way to build. Given here is an updated list of sites where the Ladder-pattern is found: in the Cyclades and Attica we find it at Andros, Athens, Delos, Siphnos, Rhamnus, Sounion and Thorikos.²⁹ In the northern Aegean, we find it: at Akanthos, Argilos and Stageira, all colonies of Andros, but also in Thasos, colony of Paros, Olynthos (Athens) and Torone (Euboea).³⁰

When it comes to the geographical distribution of the Ladder-pattern's use in fortifications, the list is much shorter.³¹ Practical and cultural matters can explain its limited use in this type of architecture. Generally, the most economical and durable material in the region

will be chosen to build a fortification.³² Therefore, even if the Ladder-pattern was well known in a city, another technique or style combined with a specific type of stone could have been more suitable for some cities looking for strong and cheap defences. But as Fachard reminds us, we should not put too much emphasis on the economic factors, since some walls could have been built for a defensive purpose as well as an aesthetic one, especially in smaller-scale structures such as towers or walls with shorter stretches.³³ This is the case at Argilos, Olynthos, Stageira, Thasos, Torone and where the Ladder-pattern is only used in specific areas. The fact that the Ladder-pattern in Northern Greece is essentially found on sites that were colonized from areas where the style first appears and that it is used in highly visible sectors of the cities, we can consider that phenomenon is due to a form of cultural unity between the southern mother-cities and their northern colonies. We think that this technique came with the settlers and that these southern colonists, as discussed below, transformed it over time into an architectural style. This transformation most probably helped to revitalize the style and give it a new appeal.

The Ladder-pattern: from economic and structural function to additional aesthetical means

In closely examining the use of the Ladder-pattern, we are able to notice changes that can be linked to a regional development. The theory being proposed is that use of the Ladder-pattern in construction went from being a purely practical 'technique' to a conscious 'style' with aesthetic and possibly cultural features. The Ladder-pattern is recorded in its oldest forms in Delos in the Archaic terrace of the Heraion, and in the inner wall of the Naxian Oikos that is dated to the first quarter of the

²⁶ See Camp 2000, 44.

²⁷ See Kienast 1978, pl. 14.3.

²⁸ In *La forteresse de Rhamnonte* of 1954, pls XXI.2, XXV.4, XXVI.2, XL.3–4, XLI.1, Pouilloux lists sites that used the Ladder-pattern in their architecture. Cambitoglou used the same list in 2002, 28 n. 55, 31 n. 57, in his paper on Torone's architecture and adds Torone and Stageira to Pouilloux's list.

²⁹ For Delphi, see Vallois 1966, 71–2 (for text); see Fraisse & Llinas 1995, 41–3, figs 100–10 (for images). For the towers of Siphnos, see Ashton 1991, 100–1, 132–5. For Andros, a general understanding of Palaiokrassa-Kopitsa's book (1996) is necessary (most importantly the images). For Rhamnus, see Pouilloux 1954, pls XXI.2, XXV.4, XXVI.2, XL.3–4, XLI.1. For Thorikos, Athens and the Sounion, Pouilloux 1954, pls XXVI.2, XXV.4, XXVII.1.

³⁰ For Torone, see Cambitoglou *et al.* 2001, 70–1, fig. 5a. For Stageira, see Sismanidis 2003, 24–30. For Thasos, see Grandjean 2011, 45–6, figs 29–30. For Olynthos, see Robinson and Graham 1938, pl. 10.2.

³¹ We can see in Pouilloux's (1954) and Cambitoglou's (2002) lists that the Ladder-pattern has not been used in many fortifications.

³² See Fachard 2012, 258.

³³ Fachard 2012, 257–60.

6th century BC.³⁴ The technique was relatively simple: the blocks were worked on the spot or in the quarry and the small stone chips were stacked to fill the gaps between them.³⁵ This method was certainly practical and inexpensive and contributed to its diffusion in various regions of Greece between the 6th and 4th centuries BC.³⁶

During the 5th century BC, a significant change in the technique appears, but only in northern Greece on sites originally colonized by the Cycladic islands. Some walls using this new version of the Ladder-pattern, mainly fortification and terraces walls, were built with greater care, noticeable in the stack work. The majority of the stacking is made of bigger rocks that have been worked. They are no longer just chips that have been easily produced in the quarry. More significant is the use of a variety of different coloured stones in the stacking, which could only have been done for aesthetic reasons. We also notice more regularity in the courses of the large Ladder-pattern walls. All these elements are well illustrated at Argilos, Stageira, Thasos and Torone where the large blocks and the stack work offer a beautiful contrast of colours, giving an impressive appearance to the cities. In

our opinion, in these cases the Ladder-pattern ceases to be a technique and becomes an architectural style, which is also a *confined phenomenon* in this small area of Greece.³⁷

Now, if these Ladder-pattern walls in northern Greece are qualified as a style, can we find an aesthetic reason to their positioning in the city? Except for the city of Akanthos where the Ladder-pattern seems to have been used as a technique and not for aesthetic reasons, all the other cities built this type of wall using the *new* Ladder-pattern style in a highly visible position.³⁸ The case of Stageira is interesting because of its combination of building methods in the city's south wall. The south-west segment is made of the Ladder-pattern that we described as a technique, with slabs easily made in the quarry. But there is clearly a desire to give an aesthetic aspect to the wall since the builders are using different coloured stones to add to the general beauty of the wall (Fig. 7). For us, there is no doubt that this sector of the wall has been made to look attractive. The south-east segment, which also received a Ladder-pattern wall, has clearly been made for aesthetic reasons. We can see that the slabs used in the stack work have been given a pleasing



Fig. 7 South-west segment of the fortification wall in Stageira (author's photo).



Fig. 8 South-east wall in the 5th-century Ladder-pattern style (author's photo).

³⁴ For the Heraion, see Vallois 1966, 71; for the oikos of the Naxians, see Bruneau & Ducat 2005, 173.

³⁵ See Bruneau & Ducat 2005, 172.

³⁶ See Cambitoglou *et al.* 2001, 71.

³⁷ Even if the Ladder-pattern is qualified as a style in these cases, the stack work was still economical since pieces from other rocks could have been used to avoid waste. See, for Torone, Cambitoglou 2002, 28.

³⁸ For Torone, see Cambitoglou *et al.* 2001, 71.

rectangular shape, as were the larger blocks (Fig. 8). The entire stretch of the south wall of Stageira was the most visible of them all, which could explain the variety of styles within it and the use of a rough polygonal wall surrounding the rest of the peninsula.

This phenomenon is not unique to Stageira, since the prominent wall in Torone's fortification (wall 'C') and 'Segment A-B' of Thasos' wall are also located in highly visible positions, next to the port, and built in this same version of the Ladder-pattern style. At Olynthos, it is the gate of Avenue A, another important position in a city that received the *new* Ladder-pattern. With all this information, we have to agree with Laurence that this special treatment of a portion of a wall is typical in less wealthy cities which wanted to give an impression of opulence without necessarily having huge financial resources.³⁹ Finally, in Argilos, a massive terrace wall in the Ladder-pattern style is found at the start of the ascension of the hill towards the acropolis. This wall was surely visible from a distance and provides one more example of the aesthetic features of this masonry.

Evidence of regionalism in fortifications

The third segment of the south wall of Stageira was built in a Lesbian masonry and stretches 50 m east of the south hill, between the two Ladder-pattern walls (Fig. 9).⁴⁰ It is interesting to note that the mixture of these two methods is only found, as we will see below, in northern Greece, at Stageira and Thasos.⁴¹

In 1941, when Scranton discussed Lesbian masonry in *Greek Walls*, he excluded Macedonia and Thrace from his list of four regions under the influence of Ionia and Aeolis where the style originated: Attica, central Greece, Greek islands (meaning the north and north-eastern islands) and the east Greek coast. He also specified that there were no known examples in Macedonia and Thrace.⁴² In the late 1990s, Des Courtils revised Scranton's list by including new archaeological findings, most of them coming from sites already listed by Scranton. Although Des Courtils mentions the many uses of Lesbian masonry in the architecture of Thasos and Samothrace (including their fortifications)⁴³ in his article, he also does not



Fig. 9 Lesbian wall in Stageira (author's photo).

³⁹ See Lawrence 1979, 235.

⁴⁰ See Sismanidis 2003, 29–32.

⁴¹ See above note 22 and note 29.

⁴² See Scranton 1941, 27.

⁴³ Lesbian walls are well represented in domestic neighbourhoods in Thasos dating from the 6th century BC, see Grandjean 1998, 369–70. For the Lesbian wall of Thasos (500–490 BC), see Grandjean 2011, 63–4, brochure II.

Regions under the influence of Ionia and Aeolis (New interpretation)



Fig. 10 New interpretation (F. Gignac, A. Perreault & K. Ouellet).

mention any sites on the northern mainland,⁴⁴ neglecting Stageira and Zone, both of which have a section of their walls (one tower to another) built in the Lesbian style.⁴⁵ In his article, he proposes to redefine areas under Ionic and Aeolic influence by regrouping Scranton's Greek islands and east Greek coast areas. However, by doing this, he, as Scranton did, ignores the Macedonian and Thracian regions. What to do then with Stageira and Zone? It

seems to us that it would be more representative of the areas of diffusion of the Lesbian style if we regrouped the sites from the northern Aegean, including Samothrace, Zone, Thasos and Stageira, into the same geographical area (Fig. 10). Contact between northern and eastern Greece was frequent during the Archaic period.⁴⁶ Ionian migration, forced or voluntary, occurred in the Northern Aegean after the conquest of Asia Minor by the Persians

⁴⁴ For the new discoveries on Lesbian walls, see Des Courtils 1998, 133. For the fortification of Samothrace, see Lazaridis 1971, 19; Ehrhardt 1985, 25–30.

⁴⁵ For the fortification of Zone and a complete bibliography of the archaeological results, see Tsatsopoulou-Kaloudi 2001, 11–14.

⁴⁶ This article and future research on Greek migration could explain the diffusion of Ionian culture after the Persian conquest, see Perron 2010.

in 545 BC. Imitations of Ionian-style pottery spread throughout all of northern Greece and became prevalent in the second half of the 6th century BC. Other influences can be found on terracottas and coins. It is therefore not surprising to see that the existence of Lesbian masonry, which could have resulted from the use of immigrant craftsmen accustomed to this architectural style, is also embedded in this region of Greece.⁴⁷ Our proposal to regroup northern Aegean sites where the Lesbian style is attested allows for a better understanding of Ionian influence in the northern Aegean, and provides us with a new angle to study regionalism in fortification building in this area.

The use of Lesbian masonry in northern Greece cannot be qualified as a confined phenomenon, but its use combined with the Ladder-pattern in the same fortification could be. This region of northern Greece is likely the only area where the two styles meet and overlap chronologically. Lesbian masonry was phased out during the first quarter of the 5th century BC and the dating of the walls of Stageira show that the Ladder-pattern style was established during that same period. There is a narrow window of time where the two styles are present in the region and are combined in fortification walls. These two elements lead us to believe that this juxtaposition of walls is confined to this region; the only two known examples are Thasos and Stageira.

There is still a lot of work to be done on the fortifications of the northern Aegean. And even if we think that we may have a confined phenomenon in this region, future research may prove us wrong. Nonetheless we hope that this brief presentation of the military architecture of the Andrian colonies and their links to southern Greece, but also to eastern Greek architectural influences, will contribute towards a better understanding of tradition, regionalism and architecture in this wide area.

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DAS BEFESTIGUNGSSYSTEM DER LELEGO-KARISCHEN STADT PEDASA*

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Zusammenfassung

Die Halbinsel von Halikarnassos weist eine Reihe von kleinen befestigten Siedlungen auf, unter denen die Stadt Pedasa aufgrund ihrer Größe und ihrer Siedlungselemente den Hauptort bildet. Die Siedlung, die sich direkt nördlich des antiken Halikarnassos auf einem Hügel mit dem modernen Namen Gökçeler erhebt, verfügt über ein Befestigungssystem aus einem Akropolismauerring, einer Zitadelle und einer Unterstadtmauer. Die Akropolismauer zeigt einen kurvigen Verlauf und ist mit nur einem Turm bewehrt. Das Haupttor der Akropolis bildet eine einfache Torgasse, die von einem Turm flankiert wird. Bemerkenswert ist, dass dieses ungewöhnlich breite Tor in einer zweiten Phase zugesetzt wurde. Die Zitadelle ist durch einen geschlossenen Mauerring von der Siedlung abgetrennt, ihren Zugang flankieren zwei Türme. Die Unterstadtmauer, die die Hauptseite der Akropolis zusätzlich schützt, weist im Gegensatz zum Mauerring der Akropolis in regelmäßigen Abständen Türme auf. Die Anlage stammt in ihrer Grundkonzeption aus archaischer Zeit. Ob es sich bei der Unterstadtmauer um eine spätere Erweiterung handelt oder ob diese zur ursprünglichen Anlage gehört, ist noch zu untersuchen.

Der Vergleich mit anderen Siedlungen auf der Halbinsel von Halikarnassos zeigt, dass das pedasische Befestigungssystem in seiner Grundanlage regionale Charakteristika trägt. Manche Merkmale aber, wie die sorgfältige Ausführung des Mauerwerks, die von zwei Türmen flankierte Zitadelle und die Größe des Haupttores, weisen Pedasa gegenüber kleineren befestigten Siedlungen als Hauptstadt aus.

Unmittelbar nördlich der antiken Stadt Halikarnassos (heute Bodrum/Türkei) erhebt sich auf dem Gökçeler-Hügel die antike Siedlung Pedasa. Das Siedlungsareal besteht aus einer von einem Mauerring umgebenen Oberstadt, die sich über die gesamte Fläche der Hügelkuppe

erstreckt. Ein weiterer Mauerring fasst eine Unterstadt ein, die jedoch oberflächlich kaum bauliche Reste zeigt. Direkt vor der Siedlung, an der Hauptzugangsstraße zur Stadt, liegt ein extramurales Heiligtum, welches als das bei Herodot überlieferte Athena-Heiligtum identifiziert

* Das Projekt wurde gemeinsam entwickelt und durchgeführt mit Irina Mittag, M.A., und Anja Wienkemeier, M.A., für deren steten Einsatz und gute Zusammenarbeit ich sehr dankbar bin. Ausdrücklich möchte ich dem Leiter der Ausgrabungen in Pedasa Herrn Prof. Dr. Adnan Diler (Universität Muğla) danken, der mir in großzügiger Weise das Befestigungssystem zur Erforschung übertragen hat und uns stets mit persönlichem, materiellem und finanziellem Engagement unterstützt hat. Mein Dank gilt ferner der Fritz Thyssen Stiftung, die durch finanzielle Förderung eine erste Pilotkampagne ermöglicht hat.

werden kann.¹ Die Siedlung wird von weitläufigen Nekropolen umgeben, die neben schlichten Grabformen auch eine einzigartige Dichte an repräsentativen Steintumuli zeigen.² Aufgrund der genannten Merkmale und der Größe stellt Pedasa eine der zentralen Siedlungen der Halbinsel in vorhekatomnidischer Zeit dar.

Forschungsstand

Die Halbinsel von Halikarnassos mit ihren zahlreichen kleinen Siedlungen, Fluchtburgen und ländlichen Gehöften wurde erstmals von William R. Paton und John L. Myres eingehender behandelt. Sie identifizierten die Siedlung auf dem Gökçeler-Hügel als das in antiken Schriftquellen mehrfach erwähnte Pedasa.³ George E. Bean und John M. Cook untersuchten in den frühen 1950ern die Halbinsel von Halikarnassos erneut. Auf der Basis der Arbeit von Paton und Myres behandelten sie detailliert die antiken Schriftquellen, publizierten eine Reihe von Inschriften und nahmen die Identifizierung von weiteren Siedlungen vor bzw. korrigierten einige der von Paton und Myres vorgeschlagenen Benennungen. Sie akzeptierten – wie auch die nachfolgenden Forscher – die Identifizierung der Siedlung auf dem Gökçeler-Hügel als Pedasa. Die Autoren beschrieben die pedasische Stadtanlage kurz und legten einen groben Plan der Siedlung vor.⁴

Grundlegend für die Beschäftigung mit den frühen Siedlungen und Bauten der Halbinsel von Halikarnassos ist bis heute die Arbeit von Wolfgang Radt, der im Rahmen intensiver Begehungen, vor allem im östlichen und zentralen Teil der Halbinsel, zahlreiche Siedlungen, Fluchtburgen, Nekropolen und Gehöfte neu aufnahm und Pläne der Anlagen erstellte.⁵ Dies ermöglichte es,

die antike Siedlungsstruktur der Halbinsel in ihren Grundzügen zu erfassen, die nach Radt aus befestigten von Dynasten beherrschten Siedlungen, Fluchtburgen für die ländliche Bevölkerung sowie einer großen Anzahl von verstreut liegenden Gehöften bestand.⁶ Erstmals untersuchte er zudem einzelne Bautypen wie Tumuli oder Rundgehöfte (sog. Compounds) und stellte Typologien für diese Bauten auf. Obwohl er Pedasa als Hauptort einstufte, behandelte Radt die Siedlung nicht eingehender.⁷ Neben der Nekropole wurden lediglich einzelne Elemente der Siedlung, wie z. B. das Westtor der Akropolis, als Vergleiche für andere Bauten auf der Halbinsel herangezogen.⁸

Erst in jüngerer Vergangenheit wurde die Erforschung der Halbinsel von Halikarnassos wieder verstärkt vorangetrieben. Adnan Diler führt seit den 1990er Jahren regelmäßig Surveys auf der Halbinsel durch und konnte den Kenntnisstand an Siedlungen und Bauten wie Compounds und Tumuli deutlich erweitern.⁹ Im Fokus seiner Arbeit stand jedoch Pedasa, dessen Stadtgebiet und Siedlungsstruktur er zunächst im Rahmen von Surveys definierte und eingehender untersuchte. Seit 2007 führt Diler jährlich Grabungen in verschiedenen Bereichen der Siedlung, der Nekropolen und im Athena-Heiligtum durch.¹⁰ Diese Grabungen sind von großer Bedeutung für die Halbinsel von Halikarnassos, da erstmals eine Siedlung dieser Region mit all ihren zugehörigen Bestandteilen ausgegraben und stratifiziertes Fundmaterial gewonnen wird.¹¹ Viele der durch die Surveys unbeantwortet gebliebenen Fragen können durch die Grabungen einer Beantwortung näher gebracht werden. In Kooperation mit den türkischen Archäologen konnten in zwei Kampagnen auch detaillierte Untersuchungen zum Befestigungssystem der Siedlung durch ein Team von deutschen Wissenschaftlern durchgeführt werden.

¹ Hdt. 1.175.

² Bei der Untersuchung der Nekropolen konnten in den vergangenen Jahren Gräber untersucht werden, die aus submykenischer bzw. protogeometrischer Zeit stammen. Damit geben die Nekropolen auch einen Hinweis auf das Alter der Siedlung von Pedasa. Zu den Arbeiten in den Nekropolen s. Diler u. a. 2009, 274–8; Diler 2009, 368–76; Diler 2011, 331–3; Diler 2012, 180–5.

³ Paton & Myres 1896, 192–5, 202.

⁴ Bean & Cook 1955, 123–5, 149–51. Untersuchungen in den Nekropolen hatte zuvor schon Maiuri durchgeführt und einen groben Siedlungsplan erstellt: Maiuri 1921–22, 425–59.

⁵ Radt 1970.

⁶ Radt 1970, 13.

⁷ Radt 1970, 13–4, 217.

⁸ Radt 1970, 134–5. Das Befestigungssystem wurde schließlich noch knapp von Isabelle Pimouguet-Pédarros im Rahmen ihrer Untersuchung zu karischen Befestigungen behandelt, s. Pimouguet-Pédarros 2000, 140–44.

⁹ Vgl. dazu Diler 2002, 11–22; Diler 2003, 143–54; Diler 2005, 137–46; Diler 2006, 479–500.

¹⁰ Zu den Grabungsarbeiten in Pedasa s. die jährlichen Vorberichte: Diler 2009, 267–84; Diler 2011, 324–42; Diler 2012, 167–95.

¹¹ Eine weitere Siedlungsgrabung auf der Halbinsel wird in Myndos (Gümüslük) unter Leitung von Prof. Dr. Mustafa Şahin durchgeführt, die sich derzeit auf die vorgelagerte Insel Tavşan Adası konzentriert. Eine spätbronzezeitliche/früheisenzeitliche Befestigungsmauer hat Şahin auf der Koçadağ-Halbinsel identifiziert, in deren Bereich er die frühe Siedlung von Myndos lokalisiert. Şahin 2009, 503–15. Zu den Vorberichten s. Şahin 2009, 503 Anm. 1.

Der vorliegende Beitrag stellt erste und aufgrund des Bearbeitungsstandes vorläufige Ergebnisse aus diesen Kampagnen vor.

Diese Einleitung abschließend gilt es noch auf einen Punkt einzugehen, der zwar für die Untersuchung des pedasischen Befestigungssystems zunächst von sekundärer Bedeutung ist, bei der Erforschung der Halbinsel von Halikarnassos jedoch von Beginn an eine große Rolle gespielt hat. Denn bereits seit dem 19. Jh. steht bei archäologischen Untersuchungen die Frage im Mittelpunkt, ob die Halbinsel das Siedlungsgebiet eines Volksstammes namens Leleger gewesen ist und wenn ja, wie die Kultur dieses Volkes zu definieren ist.¹² Grund dafür sind Überlieferungen verschiedener antiker Autoren, die Halbinsel von Halikarnassos sei das Siedlungsgebiet der Leleger gewesen.¹³ Dieser Volksstamm habe acht Siedlungen bewohnt – darunter auch Pedasa – und das Gebiet zwischen Myndos und Bargylia beherrscht.¹⁴ Später hätten sich die Leleger mit anderen Volksgruppen vermischt und seien in der Folgezeit verschwunden.¹⁵ Maussollos schließlich habe, nachdem er Halikarnassos zur neuen karischen Hauptstadt auserwählt hatte, sechs der acht lelegischen Städte der Halbinsel aufgelöst und die Bewohner gezwungen, ihre angestammten Siedlungen zu verlassen.¹⁶ Strabon führt zudem aus, dass es im milesischen Gebiet einige Wohnorte der Leleger gegeben habe und dass ferner auch an anderen Orten in Karien Gräber und verlassene Verteidigungsanlagen dieses Volkes, sog. Lelegia, zu finden seien.¹⁷

Obwohl die Überlieferungen zu den Lelegern aus philologischer und archäologischer Sicht äußerst problematisch sind, wurden den antiken Schriftquellen folgend Siedlungen und bestimmte Bautypen auf der

Halbinsel von Halikarnassos als charakteristisch für die Leleger bezeichnet und vergleichbare Bauten in anderen Regionen als deren Hinterlassenschaften gedeutet.¹⁸ Während die gesamte Siedlungsstruktur der Halbinsel sowie einige Bauformen, z. B. Compounds und Steintumuli, tatsächlich charakteristische Ausprägungen zeigen, ist dies bei den als lelegisch geltenden Mauern und einfachen Befestigungsanlagen (Fluchtburgen) weitaus schwieriger zu postulieren. Denn wie gezeigt werden konnte, finden sich die ihnen zugewiesenen gemeinsamen Merkmale einer runden Mauerführung und eines Mauerstils, bei dem in Trockenbauweise plattenartig gebrochene Steine aufgeschichtet werden, auch bei zahlreichen Anlagen in Karien und anderen Regionen.¹⁹ Somit wurde zu Recht ausgeschlossen, dass die genannten Merkmale mit einer bestimmten Ethnie zu verknüpfen sind, und vermutet, dass diese Merkmale vielmehr mit der Funktion der Bauten, fortifikatorischen Erfordernissen sowie dem zur Verfügung stehenden Baumaterial zu erklären seien.²⁰

Das Befestigungssystem

Den Überlegungen zum Befestigungssystem ist eine Bemerkung voranzustellen: Der Akropolishügel von Pedasa hat in byzantinischer Zeit eine intensive Überprägung erfahren. Im Bereich der Befestigungsmauer ließ sich dabei beobachten, dass byzantinische Mauern auf bereits vorhandene Bauten gründen. Die mittelalterlichen Baumaßnahmen sind jedoch nicht allorts tief greifend, so dass es dennoch möglich war, ungestörte Siedlungsschichten und architektonische Elemente der archaischen Besiedlungsphase freizulegen.²¹

¹² Vgl. Bean & Cook 1955, 85; Radt 1970, 10–11; Rumscheid 2009, 173–93; Diler 2011, 324. Zu den Lelegern s. Geyer, F. 1925, 'Leleger', *RE* XII 2, 1890–3.

¹³ Carstens & Flensted-Jensen 2004, 110–11; Rumscheid 2009, 175–80.

¹⁴ Strab. 13.1.58–9 (nach Kallisthenes von Olynth); Plin. *HN* 5.29.

¹⁵ Strab. 7.7.2.

¹⁶ Strab. 13.1.59; Plin. *HN* 5.29. Lediglich Myndos und Syangela hätten weiter fortbestanden.

¹⁷ Strab. 7.7.2; vgl. auch 13.1.59.

¹⁸ Vgl. etwa Paton & Myres 1896, 270. Radt 1973–74, 169–74 erkannte in der Siedlung Pidasa im Grion-Gebirge charakteristische lelegische Elemente. Anneliese Peschlow-Bindokat meinte lelegische Fluchtburgen im Latmos identifiziert zu haben. Peschlow-Bindokat 1989, 79–83; Peschlow-Bindokat 1996, 22–3. Adnan Diler spricht sich für die Existenz einer lelegischen Kultur aus, so auch Wolfgang Radt und zuletzt Frank Rumscheid. Dagegen äußern sich Anne Marie Carstens und Pernille Flensted-Jensen. Zumindest kritisch äußern sich Isabelle Pedarros-Pimouguet und Hans Lohmann.

¹⁹ Carstens & Flensted-Jensen 2004, 115–9; Rumscheid 2009, 188–91; Lohmann im Druck. Ich danke Hans Lohmann herzlich für die Zurverfügungstellung seines Manuskriptes.

²⁰ Carstens & Flensted-Jensen 2004, 119; Rumscheid 2009, 192; Lohmann im Druck.

²¹ Die dichte Bebauung der Akropolis – konglomerierende Raumeinheiten, die direkt bis an die Akropolismauer heranreichen – stammt in ihrer Grundkonzeption wohl aus archaischer Zeit, eine Reihe von Räumen weist eine Nutzung von archaischer bis in byzantinische Zeit auf. Ein ursprünglich frei stehender Megaronbau aus früharchaischer Zeit konnte im Nordwesten der Akropolis identifiziert werden, der sicherlich zu den zentralen Bauten der archaischen Siedlung gehörte, s. dazu Diler u. a. 2009, 267–8.



Abb. 2 Pedasa. Akropolismauer im Bereich des Tores G2, Ansicht von Süden (B. Özen-Kleine).



Abb. 3 Pedasa. Blick auf die Innenschale der Akropolismauer westlich des Tores G1 (B. Özen-Kleine).

ihrer natürlichen Schichtung entsprechend horizontal ausgerichtet sind.

An den meisten Stellen sind die oberen erhaltenen Lagen der Außenschale aus kleineren Bruchsteinen und Steinblöcken gebildet. Dass es sich bei diesen oberen Mauerabschnitten um spätere Reparaturen handelt, legen vereinzelt verbaute Spolien nahe.

Die Innenschale der Mauer ist aus deutlich kleineren polygonalen Blöcken gebildet, die ohne Lagenbildung aufgeschichtet sind. Lediglich im Bereich des Südtors (G1) und in einem kleinen Abschnitt im Norden der Akropolismauer ist die Innenschale aus kleinen rechteckigen Blöcken gebildet, die sorgfältig in Lagen

geschichtet sind. Im westlichen Bereich des Tores G1 kragen zudem die untersten beiden Lagen der Innenschale deutlich vor (Abb. 3). Die Unterschiede in der Bauweise der inneren Mauerschalen sprechen für unterschiedliche Phasen, wobei die beiden zuvor beschriebenen Abschnitte aus vorbyzantinischer Zeit stammen.²⁴

Nur ein einziger Turm bzw. eine einzige Bastion (T5) ist der Akropolismauer vorgesetzt.²⁵ Im Südwesten der Anlage, an der Stelle, an der die Mauer von Norden kommend nach Südosten umbiegt, erhebt sich dieser Bau, der damit an einer strategisch äußerst günstigen Stelle errichtet wurde. Von ihm aus kann einerseits die Straße kontrolliert werden, die am Athena-Heiligtum vorbei auf die Siedlung zuführt. Andererseits deckt er sowohl den Bereich nach Nordwesten als auch nach Osten Richtung Haupttor (G1) ab. Der Turm ist an seiner Nordseite gut erhalten, während die zum Hang gerichtete West- und Südseite stark ausgebrochen sind. Der Turm besitzt die Maße 7 m × 6,1 m und seine Mauern entsprechen in Ausführung und Erscheinung der Akropolismauer.

Der Turm ist in byzantinischer Zeit intensiv genutzt worden, wie zahlreiche Keramikfragmente und ein großes noch in situ befindliches Dachziegeldepot vermuten lassen. Unterhalb des byzantinischen Gelniveaus war der Turm mit mittelgroßen polygonalen Bruchsteinen verfüllt. Den originalen Laufhorizont zu definieren, war nicht möglich.

Dass der Turm zur ursprünglichen Befestigungsanlage gehört und nicht nachträglich an die Mauer angesetzt wurde, zeigt die Ecksituation zwischen der Akropolismauer und der Südmauer des Turmes (Abb. 4): Die Mauern sind zwar nicht miteinander verzahnt, doch weisen die Lage der Blöcke zueinander und die Einheitlichkeit in der Mauertechnik auf eine Bauphase hin.

Die Akropolismauer besitzt eine Reihe von kleinen Durchlässen und Toren, von denen zwei Anlagen (G1 und G4) in den beiden Grabungskampagnen detaillierter untersucht werden konnten (Abb. 1).

Das Tor G4 öffnet sich nach Westen hin, an einer Stelle, an der der Akropolishügel relativ sanft abfällt. Bei dem Tor handelt es sich um eine einfache Anlage, die aus

²⁴ Im westlichen Torbereich von G1 wurde in der Verfüllung vor der Mauerinnenschale archaische Keramik geborgen, s. dazu unten S. 553 bzw. 554.

²⁵ Ob es sich bei T5 um einen Turm oder eine Bastion handelt, ist aufgrund des Erhaltungszustandes kaum zu entscheiden. Im Folgenden wird aus Gründen des Textflusses die Bezeichnung „Turm“ verwendet.



Abb. 4 Pedasa. Ecksituation Akropolismauer und Turm T5, Ansicht von Westen (B. Özen-Kleine).



Abb. 5 Pedasa. Akropolis, Tor G4, Ansicht von Osten (B. Özen-Kleine).

einem ca. 2,5 m breiten Durchlass und zwei ca. 5, 6 m bzw. 6,3 m langen Mauerzungen besteht, die in Ost-West-Richtung verlaufen und die Torgasse bilden. Diese Torgassenmauern sind zweischalig, haben eine Breite von ca. 1,5–1,6 m und sind an ihrem westlichen Ende scheinbar mit der Akropolismauer verzahnt.

Im Gegensatz zur Akropolismauer, die aus den bereits beschriebenen großen, ohne Mörtel sorgsam in Lagen aufeinander geschichteten Kalksteinblöcken besteht, variieren die Steine der beiden Torgassenmauern in Form und Größe beträchtlich und sind nur partiell in Lagen geschichtet. Zwischen den Steinblöcken sind vereinzelt Spolien verbaut. Zudem ließ sich zwischen den Steinen und auf der erhaltenen Mauerkrone viel Mörtel nachweisen.

Bemerkenswert ist die bauliche Ausführung im Bereich des Toreinganges: Denn dort setzt sich die Akropolismauer in den unteren drei Steinlagen auch im Torbereich fort, so dass diese Lagen als eine hohe Schwelle fungieren (Abb. 5). Auch sind die Torwangen, also die Stellen, an denen die Akropolismauer im oberen Bereich nach Osten hin umbiegt und die flankierenden Mauerzungen der Torgasse bildet, nicht sauber gesetzt. So springen die Blöcke der einzelnen Lagen unterschiedlich weit vor, ein Block an der nördlichen Ecke ist hochkant verlegt. All dies spricht dafür, dass das Westtor in eine späte Phase der Akropolisbebauung einzuordnen ist.²⁶ Die Akropolismauer scheint in diesem Abschnitt ursprünglich

keinen Durchgang besessen zu haben, womit das Tor G4 – entgegen der Annahme in älteren Publikationen, in denen es als Haupttor der Akropolis bezeichnet wird – nicht zur antiken Konzeption der Befestigungsanlage gehört.²⁷

Da das Westtor als antiker Hauptzugang zur Akropolis ausgeschlossen werden kann, ergibt sich die Frage, wo das ursprüngliche Haupttor der Siedlung gelegen hat. Denn auch der Durchgang G2 im Osten der Akropolis scheidet als archaischer Zugang zur Siedlung aus: Der nur 0,75 m breite und 1,45 m hohe Durchgang ist in die anschließende Mauerkurtine integriert, wobei an dieser Stelle anhand des Mauerwerks zu erkennen ist, dass größere Umbau- oder Reparaturarbeiten stattgefunden haben. Bei dem im Durchgang verbauten Türsturz handelt es sich zudem um eine Spolie, die auf der dem Durchgang zugekehrten Seite eine griechische Inschrift trägt. Aufgrund dieser Merkmale ist davon auszugehen, dass auch dieser Durchgang sekundär eingefügt wurde.

Als eigentliches Haupttor erwies sich nach intensiven Reinigungs- und Grabungsarbeiten stattdessen das Südtor (G1) der Akropolis (vgl. den Plan Abb. 6 und Abb. 7). Bei diesem Tor hat eine Reihe von byzantinischen Um- und Einbauten die ursprüngliche Gestalt der Anlage stark verunklärt, so dass G1 stets als ein schmaler Durchlass erschien und nicht als größeres Tor wahrgenommen wurde. Die Grabungen in diesem Bereich haben jedoch ergeben, dass die Anlage in ihrer ersten Phase deutlich größere Dimensionen hatte. Das Tor sitzt auf einem

²⁶ Im Bereich des Westtores wurden zunächst intensive Reinigungsarbeiten vorgenommen. Grabungen wurden aufgrund der offensichtlich späten Zeitstellung des Tores nicht durchgeführt. Das geborgene Fundmaterial entstammt jedoch überwiegend der byzantinischen Epoche.

²⁷ Beispielsweise Bean & Cook 1955, 124, die das Westtor als Haupttor der Anlage bezeichnen; vgl. auch Radt 1970, 135.

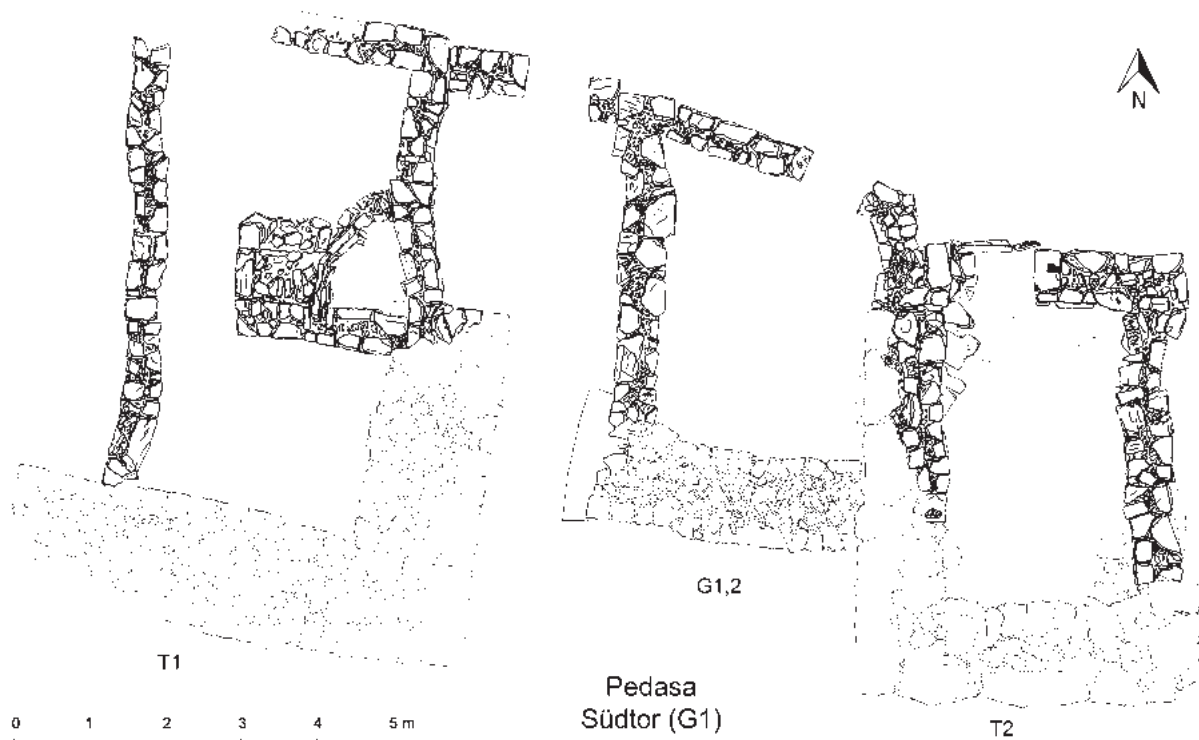


Abb. 6 Pedasa. Plan des Haupttores G1 (A. Wienkemeier, I. Mittag & B. Özen-Kleine).

Felssporn auf, der an seiner Südseite bis zu 4 m senkrecht abfällt. Es öffnet sich nach Süden und ist somit zur Hauptzugangsstraße der Siedlung hin ausgerichtet.

In der ersten Phase (im Plan Abb. 6 weiß belassen) wurde die Westseite des Tores durch eine einfache in Nord-Süd-Richtung verlaufende Seitenmauer gebildet, die mit der Akropolismauer verzahnt war. Im Osten dagegen erhob sich ein Turm, der die Maße 5,3 m × 4,4 m besessen hat. Von ihm haben sich Teile der Süd- und Westmauer und im späteren byzantinischen Einbau auch große Fundamentblöcke der Nordseite erhalten. Sie zeigen, dass der Turm nicht vorsprang, sondern seine südliche Außenmauer eine Flucht mit der östlich anschließenden Akropolismauer bildete. Letztere bindet nicht in den Turm ein, sondern setzt an seiner Südost-Ecke an.

Mauer und Turm flankierten eine Torgasse, die an der Feldseite eine Breite von 5,5 m besessen hat.²⁸ Wie bei den angrenzenden Kurtinen der Akropolismauer, so wurden auch bei dieser Toranlage langrechteckige Kalksteinblöcke verbaut. Allerdings ist zu beobachten, dass besonders regelmäßige und große Blöcke verwendet

und sehr sorgfältig in Lagen gesetzt wurden, was die Anlage gegenüber anderen Mauerabschnitten hervorhebt.

Die Datierung der ersten Phase ist aufgrund der starken sekundären Eingriffe schwierig, da kaum ungestörte Fundschichten identifiziert werden konnten. Einzig im Bereich einer Felsspalte unmittelbar westlich der Torgassenmauer konnte Keramik in einem homogenen



Abb. 7 Pedasa. Akropolis, Haupttor G1, Ansicht von Süden (B. Özen-Kleine).

²⁸ Die Torgasse verengt sich nach Norden hin leicht, so dass sie am nördlichen Ende nur noch eine Breite von ca. 4,9 m besessen hat.

ungestörten Verbund geborgen werden, die für die Existenz des Tores in archaischer Zeit spricht.²⁹

Unklar ist derzeit die Frage, wie das Tor von der Feldseite aus zugänglich war. Zwar zeigen große Felsabbrüche, die unterhalb des Tores am Hang liegen, dass das natürliche Gelände wahrscheinlich aufgrund von Erdbeben größere Veränderungen erfahren hat, dennoch wird der Felsabsatz auch in archaischer Zeit ohne Hilfe zusätzlicher Konstruktionen, wie Erd- oder Holzrampen, nicht überwindbar gewesen sein.

Ferner ließen sich bei den Grabungsarbeiten im Tor keine Hinweise auf Schließvorrichtungen finden, so dass offenbleiben muss, wie das Tor ursprünglich zu verschließen war.³⁰

In einer zweiten Phase (im Plan Abb. 6 hellgrau) wurde die große und von weitem hin sichtbare Torgasse durch eine Mauer (G1,2) zugesetzt, die in der Gasse – etwa 1,7 m von der Toraußenseite nach Norden versetzt – errichtet wurde (Abb. 7). Die Mauer ist knapp 4 m lang und 1,3 m breit und biegt an ihrem Westende parallel zur ursprünglichen Westwange des Tores nach Norden hin um, so dass eine schmale Gasse von 1,2 m Breite entsteht. Die Mauer ist an die Westseite des Turmes angesetzt, besteht ebenfalls aus zwei unterschiedlichen Mauerschalen und hat mehrere Umbauten und/oder Reparaturen erfahren, wie die unterschiedlichen Mauerstile und die Verwendung von Mörtel in einigen Bereichen zeigen. Während die unteren drei Lagen der Außenschale in Material und Ausführung der Mauer des Turmes entsprechen, ist das darüber aufgehende Mauerwerk aus kleineren unregelmäßigen Bruchsteinen gebildet. Auch die Innenschale, die insgesamt kleinteiligeres Mauerwerk aufweist, ist in den

unteren Lagen sorgfältiger ausgeführt als in den oberen, was für mindestens zwei Phasen spricht.

Die Mauer G1,2 lässt deutlich erkennen, dass die große Torgasse zugesetzt wurde. Fraglich ist, ob der verbleibende schmale Durchgang zur ursprünglichen Konzeption des Einbaus in die Torgasse gehört. Möglich erscheint auch, dass die Torgasse zunächst vollständig geschlossen und erst in einer deutlich späteren Phase erneut geöffnet wurde, wobei man eine schmale Gasse von 1,2 m Breite schuf.³¹ Diese Hypothese ergibt sich aus der sehr unregelmäßigen Bildung des Mauerabschnittes, in dem G1,2 nach Norden hin umbiegt. Denn vor der Ecke bricht die saubere Schichtung der unteren drei Lagen aus großen Blöcken zunächst ab. Erst nach einer Lücke, die mit kleinen Bruchsteinen und Mörtel verfüllt ist, schließen erneut große Blöcke an, die als Binder in Nord-Süd-Richtung verlegt die eigentliche Mauerecke bilden. Die Länge der Blöcke sowie die Lücke zwischen diesen und den weiter östlich verlegten Läufern könnten dafür sprechen, dass diese Eckblöcke zunächst im Läuferverband verlegt waren und erst nachträglich nach Norden hin gedreht wurden, um eine schmale Torgasse zu schaffen.³²

Trotz intensiver Grabungsarbeiten, vor allem im Bereich der Innenschale der Mauer, wo sich tiefe Felsritzen befinden, konnten keine Hinweise für eine Datierung des Einbaus gewonnen werden. Die Mauer sitzt auf einer sehr dünnen und kompakten Erdschicht auf, die keinerlei datierbares Material enthielt.

Festzuhalten bleibt, dass die ursprüngliche Torgasse mit dem flankierenden Turm durch eine Mauer zugesetzt wurde, die in der ersten Phase die gleiche Mauertechnik aufweist wie Toranlage und Akropolismauer.

²⁹ Die Keramik stammt aus einer Verfüllung, die im inneren, südlichen Zwickel der Torwange eingebracht wurde, um eine gerade Fläche für die Innenschale zu schaffen. Zunächst wurden größere Steinplatten in die Felsspalte gelegt und diese wurde dann mit einem Erde-Kalksteinsplitt-Gemisch aufgefüllt. Die Keramik bildet somit einen Terminus post quem für die aufgehende Innenschale. Doch legt der Befund nahe, dass Verfüllung und Errichtung der Innenschale in einem Bauvorgang erfolgt sind. Die geborgene Keramik ist relativ stark zerscherbt, es befinden sich kleinteilige Fragmente attischer Importkeramik und einer archaischen Knickrandschale karischer Provenienz darunter. Für die freundlichen Hinweise und die gute Zusammenarbeit danke ich Dr. Hülya Bulut (Universität Muğla) und Dr. Bekir Özer (Universität Muğla). Die Grabungen in den anderen Bereichen Pedasas ergänzen das Bild, da sie zeigen, dass die Siedlung in archaischer Zeit, vor allem im 6. Jh. v. Chr. in voller Blüte stand (persönliche Auskunft Adnan Diler).

³⁰ Vgl. hierzu Radt 1970, 137 mit Anm. 113. Auch er betont den Mangel an Verschlussvorrichtungen in den schlichten Toranlagen. Mögliche Holzkonstruktionen oder steinerne Verschlussvorrichtungen wie Laibungen, die Schwelle oder der Sturz, die bei dem Tor vorauszusetzen sind, wurden möglicherweise bei Zusetzung der Anlage bereits entfernt.

³¹ Eine antike Zusetzung von Toren beobachtete Wolfgang Müller-Wiener in der Siedlung Melie. Er hält es für möglich, dass diese vollständigen Zusetzungen als Reaktion auf eine drohende Kriegsgefahr erfolgten. Müller-Wiener in Kleiner u. a. 1967, 106 mit Anm. 302; Radt 1970, 137 mit Anm. 113.

³² Auch an der Außenseite des Westtores ist man offensichtlich so vorgegangen, dass Blöcke aus ihrer ursprünglichen Lage herausgedreht wurden, vgl. oben S. 552.

In einer dritten, nachantiken Phase (im Plan Abb. 6 dunkelgrau) wurde in dem Tor eine Reihe von Räumen angelegt, die u. a. als Werk- und Lagerstätten dienten.³³ Auch die Mauer G1,2 hat in dieser dritten Phase Reparaturen bzw. Veränderungen erfahren.

Mit der Identifizierung des Haupttores lässt sich die ursprüngliche Gestalt der Akropolisbefestigung in ihren Grundzügen erfassen. Sicherlich zur ersten Phase gehört das zweite Element des pedasischen Befestigungssystems: die Zitadelle.³⁴ Sie erhebt sich im Osten der Akropolis an der höchsten Stelle des Hügels (Abb. 8). An ihrer Süd- und Nordostseite fällt der Gökçeler-Hügel um mehrere Meter nahezu senkrecht ab, zur Siedlung hin dagegen verläuft der Hang relativ flach. Die Zitadelle besitzt einen eigenen Mauerring, der sie nach allen Seiten hin abschließt. Dieser ist an der West- und Südseite nur noch in wenigen Lagen erhalten, während die Nordmauer mit bis zu 3 m Höhe aufrecht steht.

Der Zugang zur Zitadelle erfolgt im Westen von der Siedlung aus, eine dem Durchgang vorgelagerte Terrassenmauer diente als Rampe. Der Eingang zur Zitadelle wird von zwei Türmen flankiert, von denen der größere nördliche Turm (T4) mit teilweise über 5 m hohen Mauern gut erhalten ist. Er besitzt die Maße 7,6 m × 6,2 m und weist die gleiche Mauertechnik wie das Südtor und der Turm T5 auf. Es ist hier zu beobachten, dass in den unteren Lagen besonders große und langrechteckige Blöcke versetzt wurden, während in den oberen Lagen die Länge der Blöcke abnimmt und sie eher quadratisch erscheinen. Der Turm ist von der Ostseite her zu betreten. Eine Sprengung durch Schatzsucher im Turm hat den Fundamentbereich partiell freigelegt und Teile der Nordmauer zerstört. So ist ohne Grabung zu erkennen, dass der Turm in seiner unteren Hälfte mit mittelgroßen polygonalen Blöcken verfüllt war. Wo der ursprüngliche Laufhorizont lag, lässt sich ohne weitere Untersuchungen nicht sagen.

Gegenüber T4 steht ein mit 5,3 m × 4,4 m kleinerer Turm, dessen Süd- und Ostmauer zum Hang hin ausgebrochen sind. An der Westseite des Turmes setzt die Akropolismauer ohne weitere Einbindung an, der Turm ragt ca. 0,3 m gegenüber der Akropolismauer vor (Abb. 9). Auf der anderen Seite der Zitadelle stößt die Akropolismauer nicht direkt an den Mauerring der Zitadelle an, da diese im Nordosten auf einem steilen

Felsen aufsitzt und die Akropolismauer daher mehrere Meter unterhalb der Zitadelle an den Felsen anschließt.

Im Inneren der Zitadelle befindet sich eine ca. 250 m² große Fläche, die dicht mit Versturzmasse bedeckt ist. Es ist daher zum jetzigen Zeitpunkt nicht zu bestimmen, wie der Innenhof der Zitadelle ursprünglich gestaltet war.

Schließlich ist als letztes Element des pedasischen Befestigungssystems der untere Mauerring zu nennen. Wie bei der Zitadelle so steht auch bei diesem eine detailliertere Untersuchung noch aus. Im Gegensatz zur Akropolismauer ist die Unterstadtmauer deutlich schlechter erhalten, der Verlauf und die Struktur des Mauerringes können jedoch aufgrund der erhaltenen Abschnitte rekonstruiert werden. Die Mauer setzt im Bereich des Turmes T5 an das obere Befestigungswerk an.³⁵ Sie verläuft dann halbkreisförmig entlang des



Abb. 8 Pedasa. Akropolis, Zitadelle mit den Türmen T3 und T4, Ansicht von Osten (B. Özen-Kleine).



Abb. 9 Pedasa. Akropolis, Anschluss Akropolismauer und Zitadelle (Turm T3), Ansicht von Süden (B. Özen-Kleine).

³³ Zahlreiche Funde byzantinischer Keramik sowie eine zutage gekommene Münze sprechen zumindest bei den Räumen der Westseite für eine Nutzung im 12. Jh.

³⁴ Die Zitadelle konnte noch nicht eingehender untersucht werden.

³⁵ Um zu klären, wo genau die Mauer ansetzt, sind weitere Arbeiten erforderlich.



Abb. 10 Pedasa. Unterstadt, Turm T9, Ansicht von Südosten (B. Özen-Kleine).

unteren Ausläufers des Gökçeler-Hügels und sichert somit die Südseite der Akropolis zusätzlich ab, über die der Zugang zur Siedlung erfolgte. Im Nordosten setzt die Mauer an dem Felsen an, auf dessen Spitze die Zitadelle errichtet wurde. Zwar ist eine Aussage zur Mauertechnik aufgrund des Erhaltungszustandes nicht für alle Abschnitte möglich, doch zeigen einige eine in Material und Bauweise der Akropolismauer sehr ähnliche Ausführung (Abb. 10). Auch zum Bau der Türme wurden die grauen Kalksteinblöcke verwendet, die überwiegend im Läuferverband in Lagen geschichtet wurden. Bei einem der Türme ist gut zu erkennen, dass die Turmecken durch die Verwendung besonders großer Blöcke verstärkt sind. Schwer zu beantworten ist derzeit die Frage, wo jeweils die Mauerkurtinen an die Türme anschlossen. Deutlich ist dies bei Turm T10, der an der Ostseite der Mauer errichtet wurde. Hier stoßen die Kurtinen an der West- und Nordseite des Turmes so an, dass der Turm teilweise in den Stadtmauerring einbezogen ist.

Aufgrund des Bearbeitungsstandes der unteren Stadtmauer ist unklar, ob die Unterschiede zwischen der Akropolismauer und der Unterstadtmauer – anzuführen sind hier vor allem die in regelmäßigen Abständen errichteten Türme – fortifikatorisch oder chronologisch bedingt sind. Schließlich ist derzeit auch noch offen, ob der Hang, der durch die Unterstadtmauer eingefasst wurde, tatsächlich als Unterstadt fungierte – also bebaut war – oder ob es sich bei der unteren Anlage vielmehr um eine Art Zwinger handelt.

Einordnung in den regionalen Kontext

Die Einordnung des pedasischen Befestigungssystems in den regionalen Kontext mit dem Ziel, einerseits charakteristische Merkmale von Befestigungsbauten der Halbinsel herauszuarbeiten, andererseits aber auch Unterschiede aufzuzeigen, gestaltet sich schwierig. Grund ist der Forschungsstand. Zwar sind mehrere befestigte Siedlungen und Fluchtburgen auf der Halbinsel bekannt, jedoch fehlen detaillierte Untersuchungen an Befestigungsbauten und vor allem Grabungen, die chronologische Fragen beantworten könnten. Bestimmte fortifikatorische Elemente, wie Türme, Bastionen und Toranlagen, aber auch Wechsel in den Mauertechniken, sind daher in einer Reihe von Siedlungen nicht eindeutig chronologisch einzuordnen, weshalb die ursprüngliche Gestalt der Befestigungen ebenso wie mögliche Entwicklungen nicht immer klar erfasst werden können. So kann eine regionale Einordnung des pedasischen Befestigungssystems nur einen vorläufigen Charakter haben.

Pedasa gehört, wie eingangs erwähnt, zu den großen Siedlungen der Halbinsel von Halikarnassos. Kleiner, aber in Grundstruktur und bestimmten fortifikatorischen Elementen vergleichbar, ist die östlich von Bodrum gelegene Siedlung Alazeytin Kalesi.³⁶ Radt geht von einer Besiedlungszeit zwischen dem späten 8. Jh. und dem 4. Jh. v. Chr. aus.³⁷ Wie Pedasa liegt auch diese Siedlung auf einer Hügelkuppe und wird von einer kurvig verlaufenden, der natürlichen Topographie folgenden Mauer umschlossen. Im Inneren der Siedlung herrschen kleinere Raumeinheiten vor, die in agglutinierender Bauweise errichtet sind. Teils sind die Räume direkt an die Befestigungsmauer angebaut, teils bilden die Rückwände der Räume selbst die Mauer. Am höchsten Punkt des Siedlungshügels liegt auch hier eine Zitadelle, die durch eine Mauer von der umgebenden Wohnbebauung abgetrennt ist.

Die Befestigungsmauer von Alazeytin zeigt verschiedene Mauertechniken. Während an der West- und Nordwestseite Plattenmauerwerk zu beobachten ist, wurden im südöstlichen Abschnitt große Blöcke verbaut.³⁸ Ob dieser Wechsel in der Mauertechnik fortifikatorisch bedingt ist –

³⁶ Die zahlreichen Fluchtburgen der Halbinsel von Halikarnassos werden hier nicht näher berücksichtigt, da sie als nicht dauernd genutzte Befestigungen Unterschiede in der Anlage aufweisen. Zumeist verfügen diese Fluchtburgen über eine einfach gestaltete Ringmauer, die ein großes Areal einfasst, welches keine oder nur eine sehr geringe Innenbebauung aufweist. Zu Fluchtburgen auf der Halbinsel s. Radt 1970, 104–18; zu vergleichbaren Anlagen s. Lohmann im Druck. Zu Alazeytin Kalesi s. Bean & Cook 1955, 125–8; Radt 1970, 17–72.

³⁷ Radt 1970, 18.

³⁸ Radt 1970, 22–3. Auch die Mauerbreite variiert zwischen etwas über 1 m Breite im Westen und Nordwesten und 2 m Breite im südöstlichen Abschnitt.

die Südost- und Ostseite ist zur See hin ausgerichtet und somit zur Hauptangriffsseite – oder ob hier verschiedene Phasen zu fassen sind, ist ohne nähere Untersuchungen nicht zu entscheiden.³⁹

Anders als in Pedasa weist die Mauer von Alazeytin eine Reihe von Türmen auf, die ausschließlich im Nordwesten der Anlage einheitlich und in regelmäßigen Abständen errichtet sind.⁴⁰ Sie binden nicht in die anschließenden Kurtinen ein, sind aus größeren würfel- bis quaderförmigen Blöcken errichtet und weisen bis zur erhaltenen Höhe eine Steinverfüllung auf.⁴¹ Wie bei der Einordnung der unterschiedlichen Mauertechniken ist auch bei den Türmen unklar, ob sie zu einer späteren Phase des Befestigungssystems oder zur ursprünglichen Anlage gehören.⁴²

Der Zugang zur Siedlung von Alazeytin erfolgte über verschiedene Tore, die unterschiedliche Grundformen zeigen. Das Haupttor im Süden besitzt einen trichterförmig nach innen gezogenen Vorhof, der von einem Turm flankiert wird, während das Tor im Norden aus einer schmalen tiefen Gasse gebildet ist, die von einem einige Meter weiter nach Norden abgerückten Turm flankiert wird.⁴³

Im zentralen Bergland der Halbinsel, im Kara-Dağ-Massiv liegen sich auf zwei Gipfeln die Siedlungen Girel Kalesi und Ören Avlusu gegenüber.⁴⁴ Erstere Siedlung wird von einer ca. 1,5 m breiten Befestigungsmauer aus unregelmäßigen groben Blöcken umgeben.⁴⁵ Die Mauer verläuft der natürlichen Topographie folgend teils in kurvigen, teils in geraden Abschnitten, Türme oder Bastionen lassen sich nicht nachweisen. Im Norden bot ein einfacher Mauerdurchlass Zugang zur Siedlung. Diese weist eine dichte Innenbebauung aus agglutinierenden Räumen auf.⁴⁶ Wiederum setzt sich

eine in sich geschlossene Zitadelle am höchsten Punkt der Siedlung von der restlichen Bebauung ab. Zwischen der Wohnbebauung und der Mauer ist in Girel Kalesi eine freie Fläche belassen worden. Deshalb – aber auch weil die Rückwände der Wohnbauten selbst schon eine nahezu geschlossene Mauer bilden – geht Radt davon aus, dass die äußere Befestigungsmauer einer späteren Phase angehört.⁴⁷ Aufgrund von Keramikfunden datiert Radt die Siedlung in das 8.–6. Jh. v. Chr.⁴⁸

Die südlich gelegene, zweite Siedlung Ören Avlusu wird nur an der Süd- und Ostseite von einer Mauer umgeben, da die beiden anderen Seiten durch eine Felsklippe geschützt sind.⁴⁹ Die Mauer zeigt einen kurvigen Verlauf und ist aus plattenförmigen Steinen in zwei Schalen errichtet. Während sie im Süden eine Breite von ca. 1,5 m besitzt, ist sie im östlichen und nördlichen Abschnitt aufgrund zusätzlich angesetzter Mauerschalen auf ca. 3 m verbreitert. Aufgrund dieser Verstärkung und einer Bastion vermutet Radt das Haupttor zur Siedlung an dieser Stelle.⁵⁰ Die Innenbebauung der Siedlung zeigt die nun schon bekannte Struktur aus aneinandergebauten Raumeinheiten. In Ören Avlusu ist scheinbar eine größere Fläche im Osten der Siedlung unbebaut geblieben. Bemerkenswert ist die Zitadelle, die im Norden am höchsten Punkt der Siedlung liegt und durch eine Terrassenmauer von dieser abgegrenzt ist. Für ihre Errichtung wurde eine 70 m × 40 m große Ebene zur Aufnahme der Gebäude geschaffen.⁵¹ Die Nutzung der Siedlung setzt Radt ebenfalls aufgrund von Oberflächenfunden in spätgeometrisch bis klassische Zeit.⁵²

Bezieht man weitere Siedlungen der Halbinsel in die Betrachtung mit ein, zeigt sich, dass sich die Befestigungsbauten Pedasas einerseits gut in den regionalen Kontext einordnen.⁵³ Gemeinsame Merkmale

³⁹ Radt 1970, 19, 22–3.

⁴⁰ Andere Türme und Bastionen sind in unregelmäßigen Abständen errichtet und weisen verschiedene Mauertechniken auf, s. dazu Radt 1970, 142.

⁴¹ Radt 1970, 22–3.

⁴² Radt 1970, 142.

⁴³ Zum Haupttor (Nr. 81a und 81 im Plan von Radt) Radt 1970, 32. Zum Nordtor (Nr. 16a und Turm B) s. Radt 1970, 27, 135.

⁴⁴ Bean & Cook 1955, 123; Radt 1970, 74–86.

⁴⁵ Radt 1970, 78–9.

⁴⁶ Im Gegensatz zur Festungsmauer weisen die Häuser ein gutes Plattenmauerwerk auf, Radt 1970, 81.

⁴⁷ Radt 1970, 79.

⁴⁸ Radt 1970, 274.

⁴⁹ Bean & Cook 1955, 123; Radt 1970, 82–6.

⁵⁰ Bean & Cook 1955, 123; Radt 1970, 85.

⁵¹ Radt 1970, 82–3.

⁵² Radt 1970, 274.

⁵³ Zum Beispiel Assarlík (Bean & Cook 1955, 116–7; Carstens & Flensted-Jensen 2004, 115), Göl (Bean & Cook 1955, 121–2; Carstens 2011, 379) oder Çilek Kalesi (Radt 1970, 86–91; Carstens 2011, 374).

sind die häufige Gipfellage der Siedlungen, der zumeist kurvige, der natürlichen Topographie folgende Verlauf der Befestigungsmauern und ihre oftmals geringe Breite von 1,5–1,8 m.⁵⁴ Gemeinsam ist den Mauern ferner, dass sie in Trockenbauweise unter Verwendung unbearbeiteter oder nur grob bearbeiteter Steine errichtet wurden, die oftmals ohne Lagenbildung aufeinander geschichtet sind. Neben dem als typische geltenden Plattenmauerwerk, den „Lelegermauern“,⁵⁵ werden für Fortifikationsbauten ebenso mittelgroße bis große würfel- oder quaderförmige Blöcke verwendet.⁵⁶ Beide Mauertechniken können durchaus in einer Siedlung nebeneinander Verwendung gefunden haben. Die Vermutung Radts, dass die Befestigungsmauern in ihrer vollen Höhe in Stein ausgeführt waren und keine Lehmziegelaufbauten besaßen, lässt sich zumindest für Pedasa bestätigen.⁵⁷ Die Mauerringe können mit Türmen bewehrt sein. Allerdings bleiben Türme, die in regelmäßigen Abständen entlang des Mauerrings errichtet sind, die Ausnahme, was mit der frühen Zeitstellung der Siedlungen in Zusammenhang stehen kann.⁵⁸ Ein weiteres gemeinsames Element der Siedlungen und wichtiger Teil der Befestigungen sind die häufig auftretenden Zitadellen. Diese sind gewöhnlich am höchsten Punkt der Siedlung errichtet und klar von den umgebenden Wohnbauten abgegrenzt. Häufig weisen sie in ihrem Inneren um einen Hof gruppierte Räume sowie Türme auf.⁵⁹

Zwei Merkmale im pedasischen Befestigungssystem sind jedoch hervorzuheben, die unter den frühen lelegokarischen Siedlungen eine Besonderheit darstellen. Zum einen fällt die sorgfältige Ausführung der Akropolismauer in ihrer gesamten Länge auf. So verstärken großformatige Blöcke nicht nur Tore und Türme, sondern finden sich auch in allen anderen Mauerabschnitten. Das Plattenmauerwerk, welches in Pedasa bei den Steintumuli verwendet wurde, ist an den Fortifikationsbauten nicht

zu beobachten. Zum anderen ist auch das Südtor der Akropolis von Pedasa eine Besonderheit. Zwar ist die Form der Anlage – eine einfache Torgasse von einem Turm flankiert – durchaus üblich und findet sich – auch in Varianten – in anderen Siedlungen der Halbinsel von Halikarnassos.⁶⁰ Bemerkenswert ist jedoch die Breite der Torgasse, die für die Siedlungsgröße Pedasas mit 5,5 m ungewöhnlich groß ist. Die nach Süden ausgerichtete Toranlage erhob sich auf einem steilen Felsen und war, wenn man sich der Siedlung von Süden auf der Hauptstraße näherte oder sich im Heiligtum aufhielt, schon von weitem sichtbar. Das Gesamtbild aus der Toranlage, dem westlich vorgelagerten Turm T5, den hoch aufragenden Türmen der Zitadelle und den aus großen Blöcken gut gefügten Mauern muss eindrucksvoll gewesen sein. Es ist daher durchaus möglich, dass die sorgfältige Ausführung der Mauern und die große Dimension der Torgasse repräsentativen Bedürfnissen der zentralen Siedlung auf der Halbinsel von Halikarnassos geschuldet sind.

Fazit

Die Erforschung des pedasischen Befestigungssystems steht noch in den Anfängen. Allerdings konnte die Grundstruktur der Anlage aus Akropolismauer, Zitadelle und Unterstadtmauer erfasst und einige Bauten konnten im Detail untersucht werden. Das Befestigungssystem stammt in seiner Grundkonzeption aus archaischer Zeit, eine genauere Datierung ist derzeit noch schwierig, da die Akropolis von Pedasa eine starke byzantinische Überprägung erfahren hat. Ferner können Ausbau- oder Umbaumaßnahmen am Befestigungssystem noch nicht mit historischen Ereignissen verknüpft werden. So muss z. B. bislang noch offenbleiben, wann und warum die

⁵⁴ Zur Mauerstärke archaischer griechischer Befestigungen s. die Aufstellung bei Frederiksen 2011, 207 Tab. 7; 208 Tab. 9; 210 Tab. 11; 211 Tab. 13. Da bei der Anlage der Siedlungen die natürliche Topographie berücksichtigt wurde, weisen die Siedlungen eine Vielzahl von Grundrissvarianten auf.

⁵⁵ Vgl. Peschlow-Bindokat 1989, 79–83; Rumscheid 2009, 187. Gegen die Deutung des Plattenmauerwerks als charakteristisch lelegisch sprechen sich zu Recht Carstens & Flensted-Jensen 2004, 113 und Rumscheid 2009, 192 aus.

⁵⁶ Die Geologie der Halbinsel ist nicht einheitlich, weshalb auch unterschiedliche Steinarten Verwendung fanden: Während im Westen der Halbinsel vulkanisches Gestein unterschiedlicher Härte und Farbe ansteht, herrscht nördlich und östlich von Bodrum ein Kalkstein vor, der in schmalen Platten bricht und sich gut für den Bau von Bruchsteintrockenmauern eignet. Vgl. auch Carstens & Flensted-Jensen 2004, 113.

⁵⁷ Radt 1970, 133. Während der Grabungsarbeiten in Pedasa ließen sich keine Hinweise auf Lehmziegel finden. Da die Häuser oftmals an die Befestigungsmauer heran gebaut sind, könnten ihre Dächer für die Verteidigung mit genutzt worden sein. Lohmann nimmt dagegen für eine Reihe früher karischer Befestigungen einen Lehmziegelaufbau an, Lohmann im Druck.

⁵⁸ Sowohl in Pedasa als auch in Alazeytin sind die Mauerabschnitte mit Türmen noch nicht chronologisch eingeordnet. Zu der Verwendung von Türmen in griechischen Siedlungen der archaischen Zeit s. Frederiksen 2011, 97.

⁵⁹ Die Funktion der Zitadellen ist nicht geklärt. Radt nimmt an, dass in den Zitadellen die örtlichen Dynasten residierten, die sich – der Hierarchie entsprechend – von der umgebenden Bevölkerung abgrenzten, Radt 1970, 13. Zu Dynasten und möglichen Dynastensitzen s. Pedersen 2009, 339–42; Carstens 2011, 369–81. Thomas Marksteiner nimmt für verwandte lykische Anlagen ebenfalls eine Funktion als „Herrensitze“ an, Marksteiner 1993, 122–3.

⁶⁰ Vgl. die Zusammenstellung der Torformen bei Radt 1970, 134–6.

Gasse des Haupttores zugesetzt wurde oder wann der Unterstadtmauerring entstanden ist.

Das pedasische Befestigungssystem besitzt Merkmale in der Grundstruktur und in der baulichen Ausführung, die es mit anderen Siedlungen der Halbinsel von Halikarnassos gemeinsam hat. Eine Reihe der Merkmale, wie Mauerführung oder Mauertechnik, lässt sich auch an Befestigungen anderer Regionen nachweisen und folglich sind diese für sich betrachtet wenig charakteristisch.

Erst das Zusammenspiel aus allgemeiner Siedlungsstruktur, charakteristischen Bauformen, etwa Rundgehöften oder Steintumuli, der Anlage der Siedlungen, den Befestigungssystemen und ihrer baulichen Ausführung gibt der Halbinsel ihr ganz eigenes Gepräge. Dies mag mit den Lelegern in Beziehung zu setzen sein.

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THE FORTIFICATIONS AT HALIKARNASSOS AND PRIENE: SOME REGIONAL CHARACTERISTICS?

Poul Pedersen & Ulrich Ruppe

Abstract

The revival of large-scale building activity in Western Asia Minor after the King's Peace in 386 BC resulted in several regionally confined phenomena in both the style and technique of the new, monumental architecture. The first part of this article will mainly focus on a peculiar system of organizing the ashlar at the exterior corners of mainly utilitarian buildings like fortification towers – the so called 'double corner bond'. The phenomenon seems to be confined mainly to the Karian and Ionian region and appears more or less regularly at buildings from the period between about 370 and 200 BC. These observations make it very probable that it derives from Hekatomnid building traditions.

The second part of the paper presents some thoughts on whether reliable conclusions in respect of one of the potential founders of New Priene, the Hekatomnids of Halikarnassos, can be drawn from the existence or absence of analogous phenomena, as for instance the double corner bond, on either site. Apart from considerations in respect of this phenomenon, our analysis will be based on a wider discussion of the construction principles of fortification towers as well as on one characteristic of the strategic layout of the fortifications at Halikarnassos and Priene, the indented trace.

In this article our intention is to make some comparisons between the city walls of Halikarnassos and Priene. They are geographically and chronologically close and some scholars have suspected the two sites to have been related in other respects too, mainly because the architect of the Maussoleion, Pytheos, was reported by Vitruvius also to be the master of the Temple of Athena at Priene, but also because Hekatomnid influence in Priene seems to be reflected in other ways, as for instance by the remarkable statue of a woman (Ada?) of the Hekatomnid family found inside the Temple of Athena.¹

Pedersen² will discuss Halikarnassos and some characteristics of its city wall, and Ruppe will connect this with some ideas on possible relations with Priene.

¹ Hoepfner & Schwandner 1994, 196, 233. Carter 1983, 27–9.

² I should like to express my thanks to the reviewer for some very good and useful comments.

Halikarnassos and Maussollos

(Poul Pedersen)

About 370 BC the Persian satrap Maussollos refounded the old city of Halikarnassos and made it the new capital of the Karian satrapy (Fig. 1). The city was equipped with a new orthogonal town plan, as were a number of other

cities in the area at about this time,³ and in addition to temples and other well-known types of buildings the architects and craftsmen of Maussollos constructed a satrapal palace and raised a huge dynastic tomb, the Maussoleion in the centre of the city. The reason for transferring the capital from inland Mylasa to the coast of the Aegean seems quite obvious. The 'King's Peace' in 386

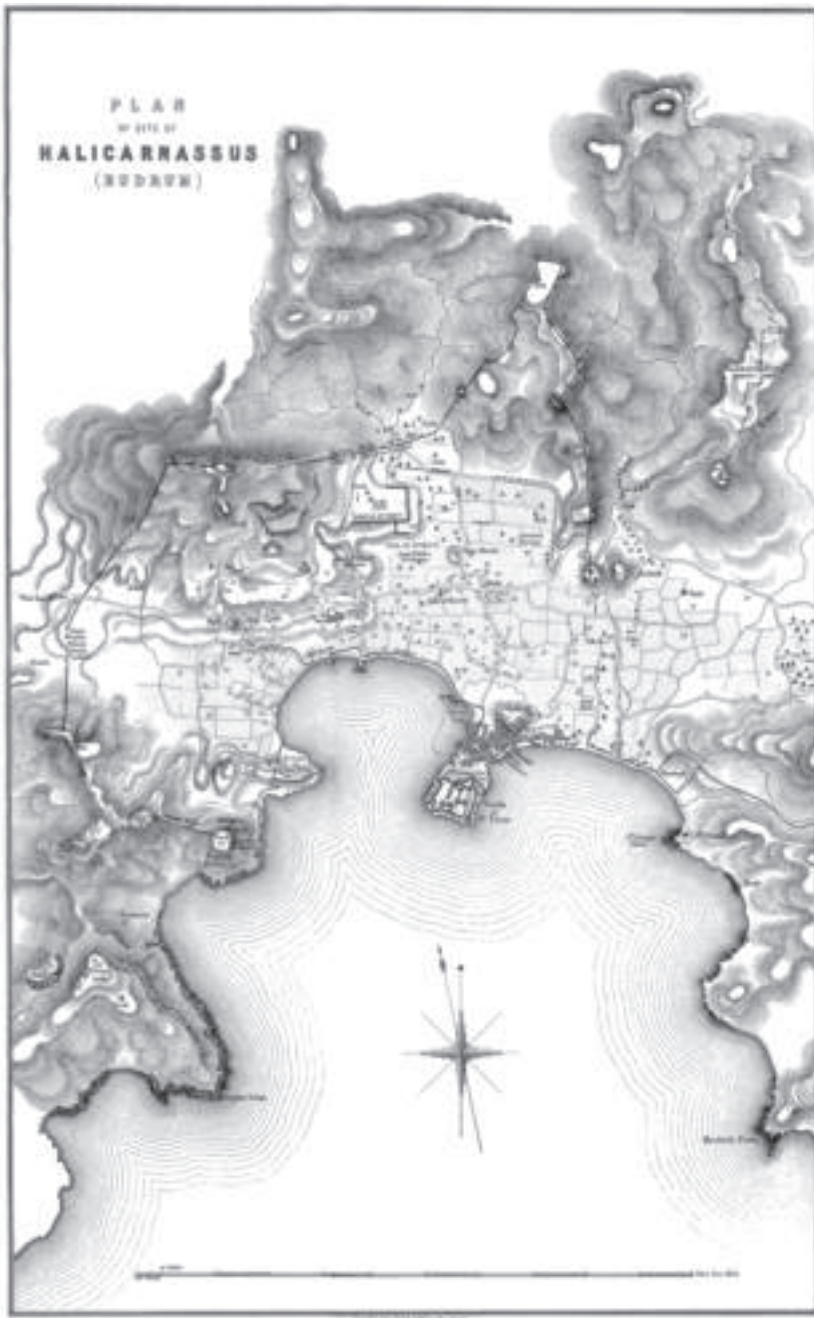


Fig. 1 C.T. Newton's map of Halikarnassos, 1862.

³ Calio & Interdonato 2005.

BC had given Western Asia Minor back to the Persians, and from then on the Aegean coastline of Anatolia had come to constitute the western border of the Persian Empire. The defence of Persian territory and its borders must have been one of the most important obligations of the Persian satraps, and for defending Persian interests in the Aegean, the inland city of Mylasa was of little use. Halikarnassos, however, facing the Aegean and having an excellent natural harbour, would form an ideal naval base. From here the fleet of Maussollos could patrol the Eastern Aegean and defend the Persian borders and from here the satrap could interfere with Athenian interests and be a nuisance to the new Athenian League, for instance by encouraging members like Rhodes, Kos and Chios to leave the League.⁴

The city wall of Halikarnassos

For the protection of the new satrapal capital and its important naval base, a strong city wall was constructed.⁵ This wall is often mentioned in general works on Greek fortifications and it has been treated in more detail by a number of scholars during the last two decades.⁶ I will briefly summarize some results of the most recent research.

The city wall of Halikarnassos is a true ‘Geländemauer’ of more than 7 km, running along the top of the hills surrounding the city. The whole wall is protected on its outside either by steep natural slopes or by an artificial ditch or escarpment excavated at a distance of about 5–10 m in front of the wall and having a width of 5–10 m (Figs 2, 3). The escarpments are sometimes quite rough and the ditches generally filled up with soil and dust due to the action of wind and rain. Therefore features like these can easily be overlooked, as they were in Halikarnassos until our recent investigations. It is probable, however, that such features must have been quite common in Late Classical and Hellenistic times especially where city walls had to cross open areas of level, flat ground without any natural defence.



Fig. 2 Halikarnassos. The fortification ditch at the Myndos Gate (photo: P. Pedersen).

A remarkable characteristic of the city fortification of Halikarnassos is that it does not consist of a citadel and a lower town, as most other places do, but has four fortified strongholds situated at regular intervals. Most important of these were the rocky Zephyrion peninsula with the satrapal palace and the old Sanctuary of Apollo, now occupied by the Crusader castle. If any of the fortified hills could be regarded as the Acropolis of Halikarnassos, it must have been the Zephyrion Peninsula.

The strategy of the fortification must have been to prevent an attacking enemy from advancing wheeled siege-towers close to the walls, by placing the walls on steeply sloping ground and if necessary strengthening the natural defence with ditches and escarpments. If an enemy nevertheless succeeded in breaking through the wall, the defenders would withdraw into the fortified strongholds and try to hold these until Persian help might arrive from somewhere else. This is exactly what happened when Alexander laid siege to Halikarnassos about three decades after the city wall was built – except that by this time no Persian relief troops were able to come to the rescue of the Persian forces besieged at Halikarnassos. Within days the strongholds were taken by the troops that Alexander

⁴ Hornblower 1982, 123–7. A brief outline of the political and historical background for the Ionian Renaissance in monumental architecture and fortification building can be found in Pedersen 2001/2002, 121–8 (based mainly on Hornblower 1982; Ruzicka 1992; and Debord 1999).

⁵ For a detailed, recent treatment of the city wall of Halikarnassos, see Pedersen 2011a.

⁶ Literature on the city wall of Halikarnassos is quite comprehensive. Among the most recent treatments are Pedersen 1994b; McNicholl 1997; Pimouguet-Pedarras 2000; Pedersen 2011a. By far the greatest single project in relation to the city wall of Halikarnassos has been the ‘Ericsson-Türkcell City Wall Restoration Project’ (‘Bodrum Antik Sur Restorasyonu’) directed by Prof. Altan Çilingiroğlu from Ege Üniversitesi and Director of Bodrum Museum Oğuz Alpözen. In relation to this restoration project both Turkish and Danish teams carried out investigations and excavations (Pedersen 2000; Pedersen 2001; Pedersen 2011a). The most recent investigations on the city wall took place in 2011, when Ulrich Ruppe and Poul Pedersen remeasured part of the wall circuit and made new observations. Some of these are treated in Ruppe’s section of the present article.

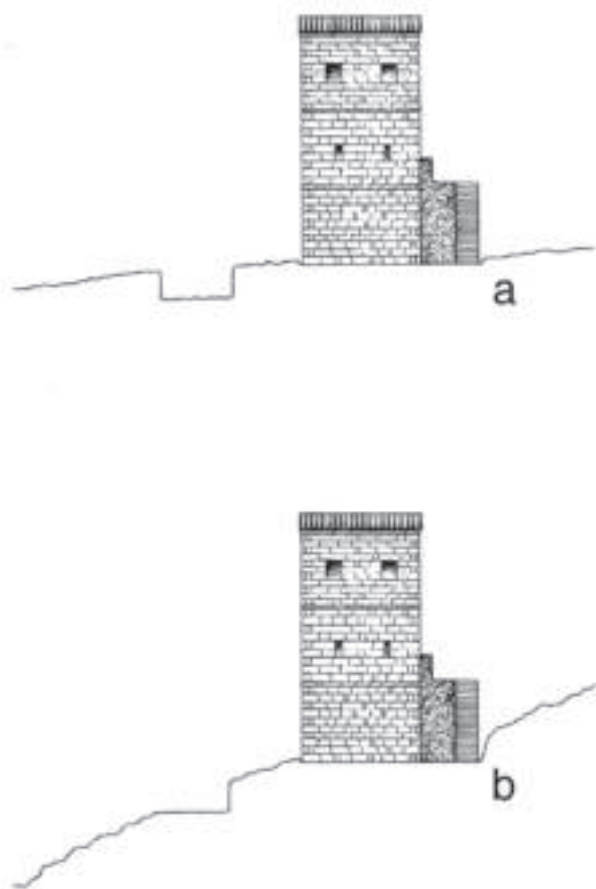


Fig. 3 Halikarnassos. System of fortification ditch (a) and fortification escarpment (b) (drawing: P. Pedersen).

had left behind for this purpose, after he marched on with the main part of his army.

The 'double corner bond' in Asia Minor fortification masonry

The construction of the city wall of Halikarnassos in about 375–370 BC may have been among the first really big undertakings in fortification building in Asia Minor for a very long time. From our present state of knowledge it appears as if very little monumental building had taken place in Western Asia Minor during the period from

the Persian wars of about 480 BC until after the 'King's Peace' in 386 BC.

When large-scale building was resumed in the early 4th century BC in the so-called 'Ionian Renaissance',⁷ there was not a very strong, living tradition in Western Asia Minor. New building presumably had to be based on the restricted experience of local workmen, more experienced workmen and architects coming from the Greek Mainland and elsewhere and not least on the inventiveness of the new architects and their abilities in creating new trends in matters of style as well as new solutions to technical questions. A number of new technical and artistic phenomena were certainly created for monumental architecture of public and religious nature in marble and limestone. Among these are the special Karian-Ionian lewis, the decorative use of visible dovetail clamps in crepis-steps and stylobates, the use of bi-conical dowels, a new developed Ionic column capital and so on. Some of these innovations may perhaps be characterized as 'regionally confined phenomena' although they were soon applied in the entire Western Asia Minor and some remained in general use in this area for about 200 years – in a period when the largest and most influential part of Greek monumental architecture was probably that of Western Asia Minor.

There is no reason to think that the general situation in military architecture was different from that of the monumental architecture of temples, tombs and public buildings and in the following we shall look closer at such a regionally confined phenomenon of the Ionian Renaissance, which is mainly seen in fortifications and city walls, the so-called 'double corner bond' (DCB). The double corner bond consists of a very characteristic use of a pair of headers side by side in every second course at the corners of towers and terrace walls and is mostly met in masonry of rusticated, bossed ashlar.

Very good examples of this phenomenon can be seen in the well-preserved Myndos Gate, which was the main city gate of Halikarnassos to the west, towards the town of Myndos. The Myndos Gate consists of a large gate yard of about 26.6 × 23.6 m, which is protected by two advanced towers of about a hundred square metres each (Fig. 4). While the orientation of the gate-complex is determined

⁷ On some characteristics of the architecture of the Ionian Renaissance – including the DCB – see e.g. Pedersen 2001/2002, 112–19 and Pedersen 2011b. For some works on the Ionian Renaissance in general: Noack 1910, ch. 4 'Die Ionische Renaissance'; Bammer 1972, 34–5; Hellström 1994; Pedersen 1994a; Muss & Bammer 2001, 161; Pedersen 2001/2002; Pedersen 2004; Pedersen 2011b; Pedersen 2013a; Pedersen 2013b; Pedersen 2013c.

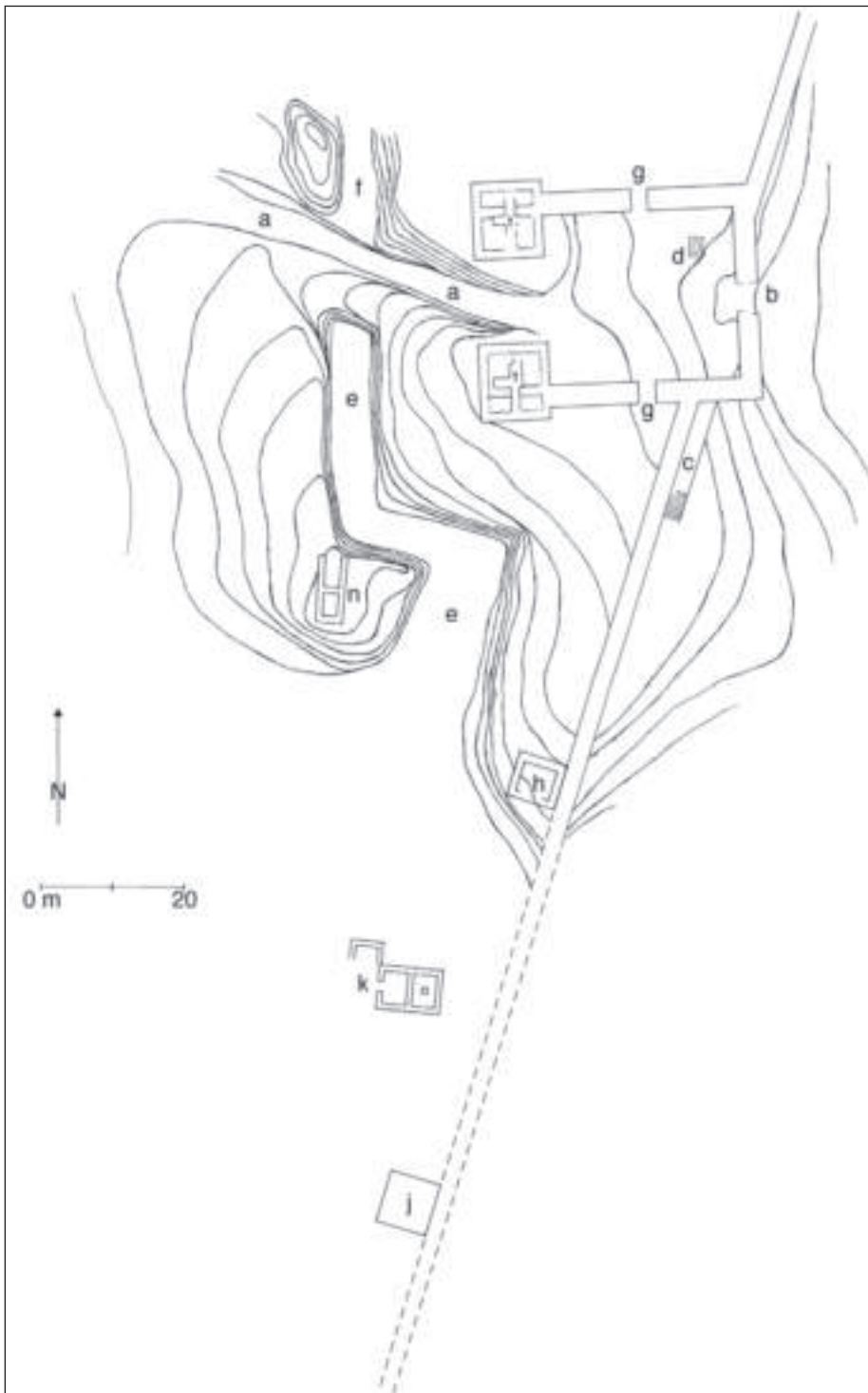


Fig. 4 Halikarnassos. Plan of Myndos Gate area with fortification ditch, gate yard and towers (drawing: P. Pedersen).

by the street-grid-system of Halikarnassos the trace of the curtain wall is determined by the configuration of the landscape and the general outline of the great wall circuit.

As is clearly seen at the corners of the towers (Fig. 5), every second course is finished by two headers side by side and as the courses on the adjoining sides do likewise this sometimes ends up in a very regular



Fig. 5 Halikarnassos, Myndos Gate. South tower seen from the north-east showing 'double corner bond' (photo: P. Pedersen).

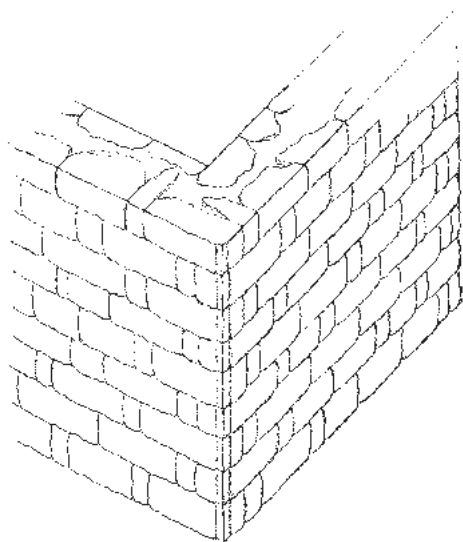


Fig. 6 Sketch showing the principle of 'double corner bond' (drawing: P. Pedersen).

pattern. It is not always as regular as seen here but is still clearly recognizable. This 'double header system' or 'double corner bond' ('DCB')⁸ may be visualized more schematically on a drawing (see Fig. 6).

In order to obtain a better understanding of this phenomenon four main aspects should be discussed:

1. Where was the DCB used? – i.e. in which geographical region has it been attested?
2. When was it used? – i.e. how is it chronologically confined?
3. What was the purpose of the DCB? – is there a practical or a decorative reason for it?
4. May the presence or absence of DCB be used for settling questions of chronology and for determining geographical origin of a workshop in the study of Late Classical and Hellenistic city walls?

THE GEOGRAPHICAL DISTRIBUTION OF THE DCB

A quick survey indicates that DCB is an extremely widespread phenomenon in Western Asia Minor. I have noticed the DCB by personal observation or on photos at the following sites: Halikarnassos, Myndos, Theangela, fortresses and watchtowers on the Halikarnassos peninsula, south of Halikarnassos at Knidos and at Kaunos, and in the interior of Karia in the fortifications around Labraunda and in terrace walls in the sanctuary at Labraunda. It is present in the upper citadel at Alinda and in the city wall of Alabanda, in the terrace walls at Amyzon, in the fortification walls at Teke Kale and at Euromos. In northern Karia the DCB can be observed in the fortifications of Latmos as well as in the fortifications of Herakleia at Latmos.

From Karia it can be followed northwards and is found at Ephesos (in towers on the Bülbül Dağ and in 'the Prison of Paulus'), in the early walls (of Philetairos) at Pergamon, at Assos and finally in certain parts of the fortifications of the city of Samos.⁹

⁸ Pedersen 2001/2002, 109; Carstens 2002, 394–5. I am not aware that the DCB-system has been mentioned before this.

⁹ I know most of these examples by personal observation on the sites, but some are illustrated in publications also. Halikarnassos: Pedersen 2011a, 313–14, fig. 13, fig. 45; Myndos: McNicholl 1997, pl. 7; Theangela: Pedersen 2001/2002, 126 (personal observation); Halikarnassos peninsula: Pimouguet-Pédarros 2000, 9.5; Pedersen 2001/2002 fig. 11; Carstens & Flensted-Jensen 2004, 117–18 and fig. 10; Knidos: Bruns-Özgan 2004, fig. 37; Kaunos: Pedersen 2001/2002, fig. 19; Ögün & Işık 2003, fig. 17; Labraunda: Karlsson *et al.* 2011, 20–30, fig. 7; Karlsson 2013, 262, figs 7, 8; Alinda: Pimouguet-Pédarros 2000, 3.5, 3.6; Pedersen 2009, 334–5, Alabanda: McNicholl 1997, pls 18, 19; Pimouguet-Pédarros 2000, 4.2, 4.3, 4.4, 4.6; Amyzon: Robert & Robert 1983, fig. 37; Teke Kale: Pimouguet-Pédarros 2000, fig. 5.5; Euromos: personal observation; Latmos: Peschlow-Bindokat 2005, 9, Taf. 17.1 and Taf. 38; Herakleia: Peschlow-Bindokat 1996, Abb. 38; Pedersen 2004, fig. 23; Ephesos: Winter 1994, fig. 8; Pergamon: Tower by the entrance to the upper citadel: Conze 1913, Taf. XVII, 1 & 2. Tower behind temenos wall west of the Agoratemple: Conze 1913, 183 & Taf. XIII, 1; Rheidt 1992, Taf. 36, 4; Pedersen 2004, fig. 21; Assos: personal observation; Samos: Kienast 1978, Tafn 24, 1; 26, 2; 30, 2.

The DCB is no doubt present in other fortifications in Western Asia Minor than those mentioned, but I am not aware of any examples of it on the Greek mainland, on Sicily and Magna Graecia and it may therefore be appropriate to characterize the DCB as a phenomenon which is regionally confined to Western Asia Minor and one or more of the adjoining islands.

THE CHRONOLOGY OF THE DCB

In what period was the DCB in use? How can it be chronologically confined? This is in my opinion still a little uncertain. The earliest examples known to me are of Hekatomnid date, and it is definitely present in Hekatomnid fortifications in both Halikarnassos and Labraunda of about 370/360 BC.¹⁰ Unless earlier examples are found, we may assume that the use of DCB begins at the time of Maussollos and the Hekatomnids.

The use of the DCB may not have been given up everywhere at the same time, and as many walls are only dated on the basis of historical considerations it is difficult to determine with any degree of certainty at what time it went out of use. Among the early 3rd-century examples are those of Lysimachos at Ephesos and of Philetairos at Pergamon, but it may have continued for a considerably longer period. The walls with DCB at Kaunos are dated by Schmaltz (on historical grounds) to after the earthquake of 227/6 BC.¹¹ The use of DCB therefore seems at present to have begun about 370/360 BC and to have been in general use in all important fortifications in Western Asia Minor during the second half of the 4th century and the first half of the 3rd century, from c. 370 BC to at least about 250 BC and perhaps even to c. 200 BC. This is nearly, but not quite, as long as the period during which it is possible to follow the 'the Ionian Renaissance' in monumental architecture such as temples, tombs and public architecture.

It may tentatively be concluded that the DCB seems to begin in Karia – maybe even in Hekatomnid Halikarnassos – in the Late Classical period and from here it spreads all over Karia and Ionia during the early Hellenistic period.

Though the system appears to be almost exclusively confined to Western Asia Minor in the period from

about 370 to 250/200 BC it is probably not unthinkable that single examples may occur at other dates and geographical areas and in other contexts. There is a fine example in the analemma of the theatre at Alinda and an example in a tower of the Crusader castle of Bodrum.

THE PURPOSE OF THE DCB IN FORTIFICATION MASONRY

Why did the DCB turn up and become so widely used for almost two centuries? Theoretically there could be several reasons and therefore it may be useful to discuss these one by one.¹²

1. *The DCB is of a purely decorative nature.* This is unlikely since it was used mainly in masonry of a utilitarian nature such as fortifications and retaining walls.

2. *Does the DCB have any structural advantages? Was the DCB developed as a method for strengthening the corners of the towers and does it make the corners stronger?* This explanation can probably not be entirely excluded and was supported by some among the audience at the conference. For instance one might argue that if an attacking enemy succeeded in removing the header placed as the outermost corner-block the remaining, second header might be thought to prevent a collapse of the corner of the tower. This is, however, contradicted by the fact that the second header is often very small and does not go very deep into the masonry. Another explanation is that by placing two headers side by side in the corner in every course the result is that the actual corner was not really a construction consisting of two faces like the rest of the wall, but constituted a more solid, pillar-like structure running up through all four corners of the towers. This may be thought to have made the tower stronger, but again, the often very small dimensions of the second header give little credibility to this suggestion.

3. *Is the second header simply the continuation of the inner face of the adjoining wall?* This may at first seem to be a reasonable explanation, but actual observation will immediately show that it is wrong (Fig. 7). Where I have been able to study the surface of a course with DCB, the pair of headers together is not as wide as the

¹⁰ Halikarnassos: Pedersen 2011a, 313; Labraunda: Karlsson 2009, 57–67; Karlsson 2010, 66–80; Karlsson *et al.* 2011, 20–30; Karlsson 2013. Karlsson's dating of the Labraunda examples is particularly important as these constitute the only examples yet that have been dated by archaeological excavation.

¹¹ McNicholl 1997, 94; Rheidt 1992, 235–59; Pedersen 2004, 427; Schmaltz 1991, 156–7.

¹² At the conference there were several useful comments and ideas, which I have tried to include in this discussion.



Fig. 7 Herakleia at Latmos. Ruined tower showing double corner bond in masonry (photo: P. Pedersen).

adjoining wall with its two faces and in these cases the second header clearly does not form a continuation of the inner face of the adjoining wall. As mentioned, it can be observed that the second header is often not very large and does not go very deep into the thickness of the wall (cf. Fig. 6).

4. *The purpose of the second header is to create a good 'rhythm' in the masonry.* This explanation is the most convincing. It is closely related to suggestions made by Rune Frederiksen and James Coulton at the conference. They suggested that the second header next to the corner is a stone that was inserted as the last one of the course to fill up the gap that was left when the rest of the ashlar in a masonry course had been put in place. As the position of the regular ashlar were determined by the position of the joints in the course below in a way so as to avoid vertical congruence of the joints, the last stretcher could

not easily both span the joint in the course below and reach all the way to the corner and therefore a smaller block, looking like a header had to be inserted next to the actual corner stone.

This seems very plausible to me, except that I would think that construction of each course probably started at the corners (as pointed out also by Ulrich Ruppe). I believe that the DCB is a result of the efforts of the builders to avoid vertical congruency of the vertical joints. The stretchers of this kind of masonry in Asia Minor are often long, but quite narrow. For this reason the corner stretcher of one side of a corner appears on the adjoining side only as a comparatively narrow header. Therefore, a second header was inserted next to corner header in order to make the first regular stretcher that followed next to these two corner headers able reach across and span over the first joint in the course below. This I believe is how the DCB came into being. At Alabanda the natural gneiss is quarried into extremely narrow ashlar and in some cases it has therefore been necessary to have two extra headers inserted next to the corner, thereby in fact creating a 'triple corner bond'.

The insertion of a second header next to the corner was a simple, practical way to create a regular rhythm in the rest of that masonry course, securing that no vertical congruency occurred from one course to the courses above and below.

A closer look at the masonry of the towers reveals that the strict pattern of the DCB in very many cases (for instance Halikarnassos, Pergamon, Samos) reflects a construction-system that does not only include the actual corner blocks but also the following set of ashlar. At these places and no doubt others it can be seen that the stretcher next to the DCB spans over a header in the course below (Fig. 8). These headers form an irregular vertical line of blocks running into the fill of the wall and thereby constitute

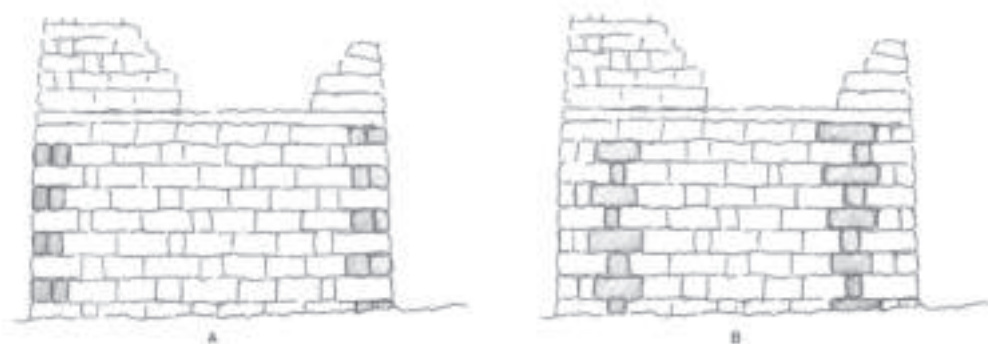


Fig. 8 Halikarnassos. South face of south tower of the Myndos Gate. Sketch showing double corner bond (A) and masonry chain next to the corner (B) (sketch: P. Pedersen).

what Karlsson has termed 'masonry chains'.¹³ Masonry chains are believed to have structural function and they certainly strengthen the corner area of the towers.

MASONRY CONSTRUCTED OF BLOCKS OF STANDARD DIMENSIONS

Though both the headers and the stretchers of this masonry are of varying dimensions the builders have nevertheless been able to place the blocks systematically in a way so that they create recognizable, regular patterns. These patterns reflect that certain systems were known to the workmen and used almost universally by generations of fortification-builders in Western Asia Minor.

The ashlar of the fortification towers are thereby in fact treated systematically in a way that is normally and very commonly found in masonry of blocks of fixed standard dimensions. Retaining walls and foundations of standard blocks were very common in the late 5th and the 4th century BC on both sides of the Aegean.¹⁴ These walls and foundations could be constructed in a number of systems according to the desired thickness of the wall. From the side, in elevation, the masonry normally appears as alternating courses of headers and stretchers (in Roman masonry termed '*maniera romana*'¹⁵). The walls are solid and constructed of ashlar all through and the intricate, fixed systems for the laying of the blocks ensure that neither vertical nor horizontal joints coincide from one layer to another. These sophisticated patterns for 'interweaving' headers and stretchers certainly remind one of the description of 'interwoven' masonry (*emplekton*) as presented by Vitruvius (II.8.7) and Pliny (Plin. *HN* 36.71).¹⁶

I believe that the DCB system just described for the fortification towers is related to the more rigid systems applied for masonry of standard blocks of the period. It is therefore interesting to observe that in the extensive foundations for the peribolos wall of the Maussolleion the builders also had to make special arrangements in the corners in order to establish a system with no vertical congruence of joints. The foundations were constructed of standard blocks 2 units wide and 4 units long (c. 60 × 120 cm). In order to facilitate an alternating rhythm in

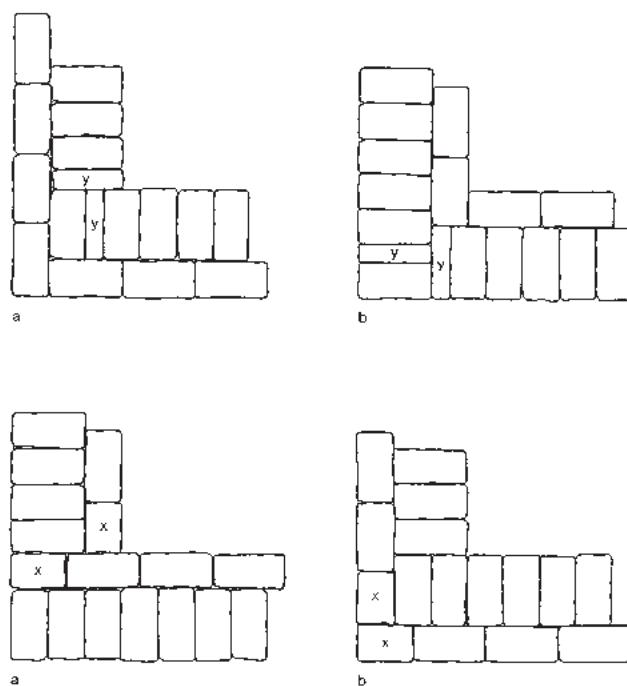


Fig. 9 Halikarnassos. Foundations for the peribolos wall of the Maussolleion. Schematic rendering of corner solutions. By systematic insertion of blocks of deviating dimensions (x and y) it is possible to combine the course a with course b in upper row and likewise course a with course b in lower row without producing congruence of the vertical joints (Pedersen 1991, 15).

the courses a special block of 1 unit (c. 30 cm) in width was inserted at the corners in the otherwise continuous row of headers of 2 units and a special block of 3 units (c. 90 cm) length was inserted in the row of stretchers, which were normally 4 units long (Fig. 9). By shifting the rhythm of every second course by half the width of a header in relation to the course below and above, congruence of joints was avoided between the courses. So the rhythm of the course in this case also was established at the corners.¹⁷

To sum up, it is most likely that the purpose of the second header in the DCB was to avoid vertical congruence of joints and to establish the best possible 'rhythm' in the rest of the course, so that the blocks span the underlying joints approximately in their middle, as prescribed by Pliny.

¹³ Karlsson 1992, 67ff.

¹⁴ A discussion of this very common type of masonry of the 5th and 4th centuries BC with further references may be found in Ginouvès 1976 and Pedersen 1991, 15–16.

¹⁵ Karlsson 1992, 68.

¹⁶ I think this type of 'interwoven' masonry is much more likely to be what Vitruvius and Pliny are describing as *emplekton* rather than the two-faced fortification walls with filling of rubble and earth. See also the discussion of *emplekton* masonry in Karlsson 1992, 67–70.

¹⁷ Pedersen 1991, 12–17.

WHAT ARE THE IMPLICATIONS OF THE OBSERVATION OF THE DCB MASONRY FOR THE STUDY OF GREEK FORTIFICATIONS?

Fortification walls of regular bossed masonry are generally difficult to date from style and technique. It seems, however, that the DCB is a very characteristic feature, which is comparatively well confined both geographically and chronologically. It will therefore often be possible to discern between Early Hellenistic and Late Hellenistic fortifications on the basis of the DCB and between workmanship of Asia Minor tradition and workmanship of other regions of ancient Greece. I think that there will be exceptions to the rule but still it is of significance that the fortifications at Pergamon are of two systems of which one has the DCB and the other, later, has not. In similar way it is interesting that at Alinda the fortified Upper city shows general use of the DCB while this phenomenon is not present in the large and well-preserved adjoining lower circuit. This, I think, might indicate that these fortifications have at least two phases and that the upper city could be the older, where Ada, the sister of Maussollos lived until she left the place in 334 BC. The lower city circuit is likely to be an extension of later Hellenistic date as it has no DCB.¹⁸

As a third example one could look at the city wall of Samos. What historical implications may it have that some parts of the city wall at Samos show the DCB while others do not?¹⁹ In 365 BC Samos was taken by the Athenians, who settled in the city after having expelled the Samian inhabitants (who found help and refuge in cities under Hekatomnid control²⁰). The Athenian colonists stayed on Samos for 44 years and in the opinion of Kienast they hardly engaged in any major work on the city wall.²¹ In 321 BC, the Samians returned and according to Kienast the fortifications of Samos were renewed shortly after this in the extensive '2. Bauphase'.²²

Therefore we must expect that the part of the fortification with DCB was constructed either before 365 BC – this would be more or less contemporary with the construction of the city wall of Halikarnassos at a time when Samos was probably under Persian influence and 'garrisoned by Persia',²³ or it was built after 321 BC, when the Asia Minor masonry style with DCB had spread to the entire Western Asia Minor. The Samos fortification does have some additional similarities with the Halikarnassos wall such as a solid first storey of the towers and towers often being built separately from the curtain wall. However, in view of additional arguments set forth by Kienast in relation to architectural technique and defence strategy the date proposed by him to 310–290 BC for this '2. Bauphase', seems convincing and perfectly in agreement with its use of the DCB.

The foundation of New Priene

(Ulrich Ruppe)

References to Priene in the ancient literary sources attest to its existence since at least the 7th century BC,²⁴ but unfortunately the urban centre of the Archaic polis has not been located yet. The well-known ancient town identified as Priene and excavated by Theodor Wiegand at the end of the 19th century is clearly the refounded Classical and later city.²⁵ Neither during the excavations of Wiegand, nor during the campaigns of the new excavation project,²⁶ were any objects found that can safely be dated to the Archaic period. Even from early or high Classical times the number of finds is extremely low, and those that do exist are easily portable objects.²⁷ Furthermore, the earliest inscriptions that have been found in Priene date from the very late Classical or earliest Hellenistic times respectively,²⁸ and

¹⁸ Pedersen 2009, 334–5.

¹⁹ Good examples may be seen in Kienast 1978, pl. 24, 1 (Turm 19) and 30, 2 (Turm 27). Kienast does not mention the double corner bond at Samos.

²⁰ Hornblower 1982, 112.

²¹ Kienast 1978, 103.

²² Kienast 1978, 103.

²³ Kienast 1978, 97; Hornblower 1982, 135.

²⁴ See the list in Kleiner 1962, 1185–9.

²⁵ Wiegand & Schrader 1904.

²⁶ Systematic archaeological research was resumed in 1998 under the direction of Prof. Wulf Raack from Goethe-Universität, Frankfurt (Germany).

²⁷ For the early finds from Priene cf. the comprehensive study of Susanne Prillwitz: Prillwitz 2007, *passim*.

²⁸ For the comprehensive epigraphic evidence see Hiller von Gaertringen 1927.

from this period on the number of finds in general starts to increase rapidly. In sum, the archaeological and epigraphic evidence points to a refoundation of Priene at the present place in the middle of the 4th century BC.

Unfortunately we do not know anything about the historical context that finally resulted in the relocation of Priene. Hence, at the present state of research it is not possible to achieve a more precise date of the refoundation than the one concluded from the archaeological and epigraphic evidence. Only quite general historical considerations can be made. For instance it is widely assumed that the ambitious project to build a new town from scratch exceeded the economic potential of the small community of Priene²⁹ which had gone through hard times in the decades following the Ionian Revolt.³⁰ Possibly the *polis* even lost its independence to Miletos for a certain period of time in the second half of the 5th century,³¹ and as Alexander in his edict from 334 addresses 'those living in Naulochon, as many as they are Prienians, shall be autonomous and free',³² it might even be possible that the former settlement at this point of history had ceased to exist and that Naulochon, the harbour-town of Priene, had become the intermediate urban centre of the *polis*.³³

Under the given historical circumstances in the mid-4th century three powers with specific interests in the region are generally considered as potential benefactors of the refoundation.³⁴ First of all Alexander is assumed to have played an active role in it. As to other Greek *poleis* in Asia Minor he granted autonomy to the Prienians too, and

the above-cited edict had been inscribed on the front of an anta of the temple of Athena right below a second inscription which said that the temple was dedicated to Athena by Alexander. One could conclude from this evidence that the initiative to build (and finance) the temple was taken by Alexander and that this act was closely connected to the grant of autonomy. And as the temple is generally considered to be one of the earliest buildings of Priene, the town itself may have been built as well during the following years. Given that the Prienians did not have the economic potential to do this on their own, consequently Alexander was suggested to be the benefactor.³⁵ These conclusions are, however, evidently weak. Alexander could have given his share for the temple at any time during the period of construction of the sanctuary, even if the refoundation of Priene dates to the 350s. This consideration strengthened the argument of those scholars who favoured the Athenians as possible promoters, as they – in the aftermath of the death of Maussollos in 353 – sought to regain influence in Ionia.³⁶ As a third plausible party the Hekatomnids had been taken into consideration as founders of New Priene.³⁷ Under Maussollos the Hekatomnid dynasty gained more and more independence from the Persian king during the 360s and 350s BC and continuously expanded its sphere of influence. And as we know that Pytheos, who worked at the Maussolleion of Halikarnassos, was the architect of the temple of Athena in Priene (Vitr. 1.1.12; 7.praef.12), some scholars would like to ascribe to him – or at least to Hekatomnid architects – the whole urban layout of the new town.³⁸

²⁹ Inter alia Schipporeit 1998, 211; Botermann 1994, 163.

³⁰ We do not have any reference if or to what extent Priene was destroyed by the Persians after the Ionian Revolt. At least the polis continued to exist as a political entity as it is listed in the tribute catalogue of the first Athenian League for the years between 450/49 and 443/42 – however with a tribute of 1 Talent only. This reflects the poor economic potential of the town during this period, cf. Hiller von Gaertringen 1927, 200, nos 441, 443.

³¹ Shortly after the last mention in the tribute lists of the first Athenian League in 443/442 (see note 30), Samos and Miletos fought a war about Priene. Miletos won after the intervention of the Athenians (Thuc. 1.115.2). Cf. Asboeck 1911, 2; Regling 1927, 2; Hoepfner & Schwandner 1994, 188; Rumscheid 1998, 14. In 427/26 BC Priene is mentioned in the tribute lists again. If the polis had lost its independence it must have regained it by this year at the latest.

³² Hiller von Gaertringen 1927, 3–4, no.1; Heisserer 1980, 142–68; Sherwin-White 1985.

³³ This supposition is directly linked to the emending of line seven of the edict. In contrast to Hiller von Gaertringen, Heisserer 1980, 146 suggested a reading that implies two different groups of Prienians: (1) those living in Naulochon who should be autonomous and (2) 'the Prienians themselves' – who are obviously meant to be those living in Priene. If this reading was correct the two groups would have had a different legal status which for citizens of the very same polis seems to me highly improbable.

³⁴ The prevailing hypotheses concerning the potential benefactors of the refoundation of Priene is too complex an issue to be debated in detail in this short paper. For a more substantial account than is given in the following paragraph see the comprehensive discussion in Schipporeit 1998, 210–29; Botermann 166–81. For the Hekatomnid patronage: Carstens 2009, 111–17.

³⁵ For the Alexander edict: Hiller von Gaertringen 1927, 3–4, no. 1; Heisserer 1980, 142–68; Sherwin-White 1985; Thesis of refoundation of Priene by Alexander: Wiegand & Schrader 1904, 45; Asboeck 1911, 3–4; Berve 1926, 296; Hornblower 1982, 323–30.

³⁶ Hiller von Gaertringen 1927, XI; Kleiner 1962, 1187; Schede 1964, 2; Hoepfner & Schwandner 1994, 189.

³⁷ Bean & Cook 1957, 141; Schipporeit 1998, 218–29.

³⁸ Against Bean & Cook 1957, 141, who believe that New Priene is a Hekatomnid foundation, Hiller von Gaertringen 1927, XI; Hoepfner & Schwandner 1994, 196, 233; and Raeder 1984, 10 believe that the relocation of Priene was sponsored by the Athenians, but that the layout



Fig. 10 Map of Priene (G. Kummer, city wall: U. Ruppe).

of the new town was planned by Pytheos. Cf. also: Gruben 2001, 416; Kleiner 1962, 1193; Riemann 1963, 459. Apart from his work at the Maussoleion of Halikarnassos, Pytheos is sometimes considered to be the architect of the Zeus Stratios temple in Labraunda (Hellström & Thieme 1982, 46–56; Hoepfner & Schwandner 1994, 233) and even the layout of the town of Halikarnassos is ascribed to him by Hoepfner & Schwandner 1994, 233, an ascription that is considered by Kleiner 1962, 1193 too. However, Raeck 2005 argued convincingly against the identification of Pytheos as the town planner of Priene and he could show that equating urban planning with the occupation of architects is a modern idea rather than practice in Antiquity.

The city wall of Priene

One of the first monumental building projects of the new town was the 2.5 km long fortification wall.³⁹ Priene lies on a hill protruding into the Maeander valley (Figs 10, 11). Steep slopes to the west, south and east make any approach to the wall a tough challenge, as on all these three sides of the lower town the fortifications keep the plain at a distance and make advantage of commanding ground. Even the south wall, following the line of the slope where it meets the Maeander Valley, is situated on average some 20 to 40 metres above the plain. Apart from the steep slopes, additional topographical features made any attack on the town from the south and west even more difficult. The plain directly south of Priene must have been marshy – just as it still was up to the 19th century AD – and the bay west of the town still belonged to the sea at the time of the refoundation of Priene.⁴⁰ The Hellenistic harbour was possibly situated here, before the bay was slowly silted up with the sediments of the Maeander river during the following centuries.

To the north of the lower town the acropolis-rock, the *Teloneia*, rises (Figs 11, 12), on top of which, at an altitude of up to 375 m, lies a plateau of high strategic importance. It is obvious that it had to be incorporated into the fortified area too (Fig. 10). The strategic significance of this plateau is underlined by constant intensive building activity at its fortifications. Regular repairs and several extensions were carried out throughout the centuries until the end of the Byzantine period.⁴¹ Just as in the lower town, any approach to the acropolis from the east and west was extremely difficult due to the steep slopes. From the south only a narrow stepped path from the lower town led up the almost vertical face of the rock. On the other hand, convenient access was possible from a mountain saddle on the north side of the plateau, which could easily be reached from the Maeander plain following a valley east of the town hill. From this saddle there was a moderate ascent to the city wall.

Thus, the most vulnerable stretches of the entire fortification system were the northern flank of the



Fig. 11 Aerial photo of Priene (photo: O. Durgut).



Fig. 12. Priene. Acropolis rock (photo: F. Rumscheid).

³⁹ Ruppe 2007, 278–9.

⁴⁰ For the geographical situation at the time of the refoundation of Priene see Müllenhoff 2005, 57–72.

⁴¹ For the building history of the fortifications see Ruppe 2007, 271–80. The extensions of the acropolis fortifications during late Antiquity and Byzantine times are indicated in a lighter shade of grey on the plan without differentiation of the phases (Fig. 10).

Teloneia wall and, to some extent, the area around the East Gate, where the road from Magnesia ends.

The fortifications at Halikarnassos and Priene – some regional characteristics?

In the short historical introduction given above, the three most prominent theories about the political circumstances of the relocation of Priene were presented. However, all these theories are based on highly speculative assumptions, and lacking new evidence, other methods have to be found to achieve a higher plausibility for one hypothesis or another. One method that could verify or falsify for instance the theory that Hekatomnid architects had been involved in the construction of New Priene is, obviously, the comparison of the principles of construction at the two sites. If certain phenomena could be identified among these principles that are confined to the Karian region at the time of the Hekatomnid reign, and if these phenomena could be observed in the earliest structures at Priene as well, this evidence would, apparently, support the hypothesis. And as Pedersen pointed out above that the fortifications of Halikarnassos in their main preserved traits most probably date to the time of the refoundation of the town, and as those of Priene are generally assumed to date to the time of the refoundation of this town too, the most promising monuments of comparison among the early structures in both towns are in my opinion the city walls.

Three features shall be discussed here exemplarily: first a resumption of the topic of the ‘double corner bond’ (DCB), then a consideration of some construction principles of towers and finally the presentation of one feature of the strategic layout of the two city walls: the indented trace.

THE ‘DOUBLE CORNER BOND’ IN THE FORTIFICATIONS OF PRIENE

Pedersen has argued that we should understand the DCB as a phenomenon that derived from Hekatomnid building traditions, and I fully agree with his point of view with regard to both the topographical/chronological distribution and the technical aspects. Given the Hekatomnid origin of this phenomenon, one should be able to observe it at the city wall of Priene as well if New Priene was founded by the Hekatomnids, or, at least, if Hekatomnid architects had played some role in building the town.

In fact the DCB can be observed at fortification towers in Priene. The occurrence is not very consistent though, rather the opposite. Most external corners of towers and jogs show sporadic examples only, at many of them the DCB doesn’t occur at all. Only one preserved tower shows the pattern more or less regularly – though not in a very elaborated manner (Fig. 13). At this very tower – but at others too – the second masonry phenomenon described by Pedersen can be observed as well: ‘... that the stretcher next to the DCB spans over a header in the course below’⁴² (Fig. 13, course 3 and 5 from the top. The ashlar in course 3 is cracked). On the other hand isolated examples of the latter appear in towers with a ‘single corner bond’ as well, but hardly ever as a systematic ‘masonry chain pattern’. To sum up, the use of the DCB and the ‘masonry chain pattern’ at Priene looks rather arbitrary and does not seem to constitute a distinct construction principle. But, of course, at Priene as well the building teams had to stick to the basic rules of masonry, i.e. first of all to achieve a strong masonry bond by avoiding a vertical congruence in the joints. This may occasionally lead to patterns that resemble the two described phenomena without intentionally following their principles.



Fig. 13 Fortification tower O5/6. South face (photo: U. Ruppe).

⁴² See above, p. 567.



Fig. 14 Fortification tower N3/4. East face (photo: U. Ruppe).

But what implications does this evidence have for the above mentioned hypothesis? Before we draw further conclusions some other characteristics which are typical of the Priene masonry but differ apparently from those in the city wall of Halikarnassos and many other Karian fortifications have to be discussed.

One of those characteristics is that the width of the stretchers is generally much greater than at Halikarnassos. It reaches normally about half of the length of the ashlar (Fig. 14). This feature is sometimes even more pronounced at exterior corners where blocks appear as stretchers on one side and as headers on the other. It seems as if extra-wide blocks were chosen for the corners, obviously to strengthen them. This is remarkable as 'regular' headers are often extremely narrow. Thus, if the DCB was to deal with the problem that 'the last stretcher could not easily both span the joint in the course below and reach all the way to the corner',⁴³ at Priene there was no need of a second header to fill the gap (which would make the DCB), because of the greater width of the corner blocks.

At Halikarnassos, on the other hand, the corner blocks are very narrow (Figs 5, 6), and if any tendency compared to 'regular' headers can be observed at all, it seems to me that the latter rather tend to be less narrow.

So if we can draw the conclusion that at Halikarnassos the DCB was motivated by narrow corner blocks and at Priene there was no need of the DCB because wider corner blocks were used, it might be undue to draw further conclusions in respect of the origin of the architects. But of course one could ask if the use of narrow ashlar is a regionally confined phenomenon. So why have the builders of the Karian structures chosen narrow blocks for the external corners? Was this a deliberate choice (which meant that they deliberately weakened the exterior corners – which can hardly be assumed)? Was it a result of geological conditions in the quarries? Or are there still other determining factors? This will be returned to after taking a look at the construction principles of towers at Halikarnassos compared to those at Priene.

CONSTRUCTION PRINCIPLES OF TOWERS.

PRIENE VS. HALIKARNASSOS

Neither at Priene nor at Halikarnassos is the architecture of towers and the underlying structural idea absolutely consistent. Nevertheless, at both places a predominant type can be discerned. In this very short review there is no room for going into greater depth, so to make matters simple, these predominant types will be taken as representative of their respective sites.

Comparing the architecture of these predominant tower types at Priene and Halikarnassos one difference in the architecture becomes obvious immediately: the common feature is that the towers of both fortifications are solid below the level of the wall walk. But whereas the outline of the towers at Priene is formed by the continuation of the inner or outer face of the adjacent curtains (cf. Fig. 15.1, 15.2.), the towers at Halikarnassos are constructed as individual structures,⁴⁴ the outer walls having two faces (Fig. 15.3, 15.4). And whereas the solid base of the Priene towers had no further interior division before the core consisting of rubble and earth was filled in, the base of the Halikarnassos towers was divided into four compartments by interior cross walls before it was filled up to the wall walk level. And finally, whereas at Priene the outer walls of rooms above the level of the wall walk were erected with two faces that were founded

⁴³ See above, p. 567.

⁴⁴ In fact some are bonded to the curtain and others are not. Nevertheless their exterior walls were not interrupted at the adjacent curtains.

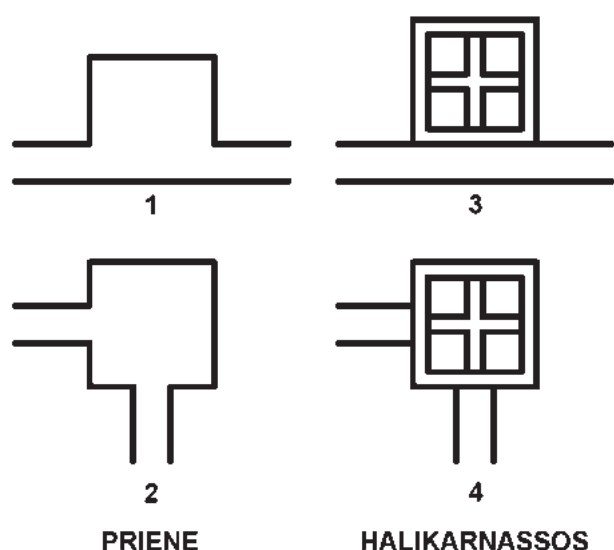


Fig. 15 Construction principles of towers. Priene (1 + 2). Halikarnassos (3 + 4) (drawing: U. Ruppe).

on slabs lying on the fill of the base, the analogous walls at Halikarnassos were simply the continuation of the two faces of the walls below wall walk level.

It is evident that the underlying idea of the two types differs fundamentally. In fact, the Halikarnassos type could be a regionally confined phenomenon. Interior cross walls in a hollow ground floor supporting the floor of the artillery storey are a common feature of Hellenistic fortifications – interior cross walls in a filled up base below wall walk-level in Classical times to my knowledge are not and neither they are in later times. Still, the distribution of the phenomenon within Karia has still to be investigated.

Can we draw further conclusions from the fact that the predominant (perhaps regionally confined) tower type at Halikarnassos differs that much from the one at Priene? It is obvious, that the fundamentally different construction technique at Halikarnassos seems to be motivated by the intention to supply the towers with a higher degree of stability compared to the ones at Priene. However, the realization of that idea might first of all be a question of economic resources and not necessarily one of cultural influence or technical know-how. One could, for example, hypothesize that Hekatomnid architects had chosen a more elaborate concept for the construction of the towers in the capital than they did for the rural

town of Priene.⁴⁵ This shows, I think, that we have to be very careful before we draw further conclusions from the existence – or the absence – of (alleged) regionally confined phenomena.

Returning to the questions that have been raised above about the DCB – the results of the comparison of the construction principles may also have some impact on our interpretation of the DCB. For building exterior tower walls with two faces having a thickness of 0.60–1.00 m – which seems to be the average range in late Classical fortifications – relatively narrow stretchers are needed. If you take twice the depth of the stretchers and add a certain number for the fill, it is evident that using stretchers with the dimensions of the ones at Priene of regularly far more than half a metre in depth ends up in much thicker walls. Thicker walls on the other hand would result in either much smaller chambers in the towers or in larger outer dimensions of the building; neither of these is an economical solution. Thus, there is a link between narrow stretchers and walls with two faces, the latter requiring either extra-long stretchers on the header-side of exterior corners, or the DCB (if long blocks are not available due to the local geological conditions).

So far we have some initial ideas and thoughts about the technical background of the DCB in relation to certain construction principles. They represent a very first step in research and are still quite hypothetical in character. And of course there will be arguments which could question the theory developed above. Even the evidence at Priene might contradict it: on the acropolis for instance two towers are preserved that do not belong to the standard type, having rooms below wall walk-level and walls with two faces with huge ashlar on the outer face. These are compensated with extremely small ashlar on the interior face. But this solution just shows that walls with two faces do not *necessarily* have the DCB as a result, that other solutions to the problem were common practice as well. It does not contradict the theory that the DCB has to be seen in close connection with walls having two faces.

INDENTED TRACE

The term ‘indented trace’ is not clearly defined. It is often used in a very undifferentiated way for any kind of wall trace with regular bends that allow for the enfilade of the adjacent curtains. All such concepts like (1) meandering

⁴⁵ This objection was made by Prof. Dirk Steuernagel after a presentation I gave at Frankfurt University in February 2009.

traces, (2) pronounced zig-zags or (3) layouts that show jogs – i.e. offsets resulting in short flanks that separate adjoining curtains (which the French would call *tracé à crémaillère*) – are normally subsumed under the same term ‘indented trace’.⁴⁶

In this paper I restrict myself to (3) which I call the ‘systematic indented trace’ – at least if jogs appear regularly in a series over a longer stretch of wall. This layout seems to appear first at fortifications of the mid-4th century BC. Because of this chronological *terminus* and the topographical distribution – besides a few fortifications in Greece making use of it, the most prominent examples seem to be concentrated in Western Asia Minor – Roland Martin and Yvon Garlan believed it to be a feature developed by the Macedonians and spread during their campaigns.⁴⁷ Lacking any other evidence than the mentioned chronological and topographical coincidences, this ascription could have been questioned earlier. But new evidence shows that pre-Macedonian examples of the systematic indented trace do exist in Western Asia Minor, which renders the hypothesis obsolete.

The systematic indented trace was mainly employed where walls descend a slope.⁴⁸ Here it obviously served as a more economic substitute for towers or other enfilading devices that protrude with two flanks: as enfilading for ballistic reasons is more effective if it is directed downhill, bilateral structures could be dispensed with, relying on one single flank pointing downhill, though with shorter intervals between the jogs compared to bilateral flanking devices. In some cases the feature was employed at relatively level traces as well, if they were not exposed to potential attack. This is the case for instance at the south wall of Priene, which was protected by marshy ground at the foot of the hill. Only a few fortifications are known where towers were erected right on top of the jogs – most probably to accommodate small artillery: apart from isolated examples, well-preserved jog towers can be observed at Aitolian Chalkis and there is evidence for such a solution in some jogs at Priene.⁴⁹ At the southern cross wall at Miletos, towers are attached to the field side of the jogs.⁵⁰ This very complex solution dispenses

with all the economic advantage of the indented trace.

I have referred to Priene twice in the last paragraph already. In fact, one of the most remarkable features of its city wall is the intensive use of the systematic indented trace (Fig. 16). It can be observed not only, as mentioned above, at the south wall, but also at the west and east wall, that both descend the steep slope from the foot of the Teloneia.

Latest research at Halikarnassos has shown that the builders of this fortification followed similar strategic concepts. Up to now the only published plan of the city wall of Halikarnassos is the rough sketch drawn by Newton in the 19th century (Fig. 1), but a GPS-survey in 2011 revealed many formerly unknown details of the wall trace. One of these details is the regular use of the indented trace where the wall descends on both sides of the North-Eastern Extension. Unfortunately, due to the poor state of preservation, the trace of the wall coming down on the east side of Göktepe could not be investigated in detail. Only its rough flight was measured, but no flanking devices could be identified anymore.

Figure 16 shows a first CAD sketch of the survey data processing. Apart from the jogs that could be verified, in some cases the former existence of yet further indentations could be inferred indirectly where the wall had disappeared completely: At several places the diverting flights of the adjoining curtain walls could not have met in the gap except if a jog had existed.

But does the verification of the systematic indented trace as a common feature at the fortifications of both Priene and Halikarnassos have any implication for the hypothesis that Hekatomnid architects were involved in the construction of New Priene? Or can we, at least, call this concept a ‘regionally confined phenomenon’? From my point of view hardly one or the other. It is true that the evidence seems to indicate a concentration of the use of this layout in the Karian and southern Ionian region. It can be observed, apart from Priene and Halikarnassos, for instance at Erythrai, Kolophon, Metropolis, Iasos (mainland wall), Miletos (southern

⁴⁶ For the differentiation in French between *tracé en dent de scie* (1 and 2) and *tracé à crémaillère* (3) and for the analogous terminology of Philo of Byzantion see Garlan 1974, 245–50. Comprehensive discussion of the indented trace: Winter 1971.

⁴⁷ Martin 1947–8, 138; Garlan 1974, 249–50.

⁴⁸ Cf. the examples discussed by Winter 1971, 415.

⁴⁹ Chalkis: Noack 1916, 237–9; Lawrence 1979, 351; Priene: Ruppe 2007, 299–310 with n. 52.

⁵⁰ Gerkan 1935, 53–80; McNicoll 1997, 164–70.

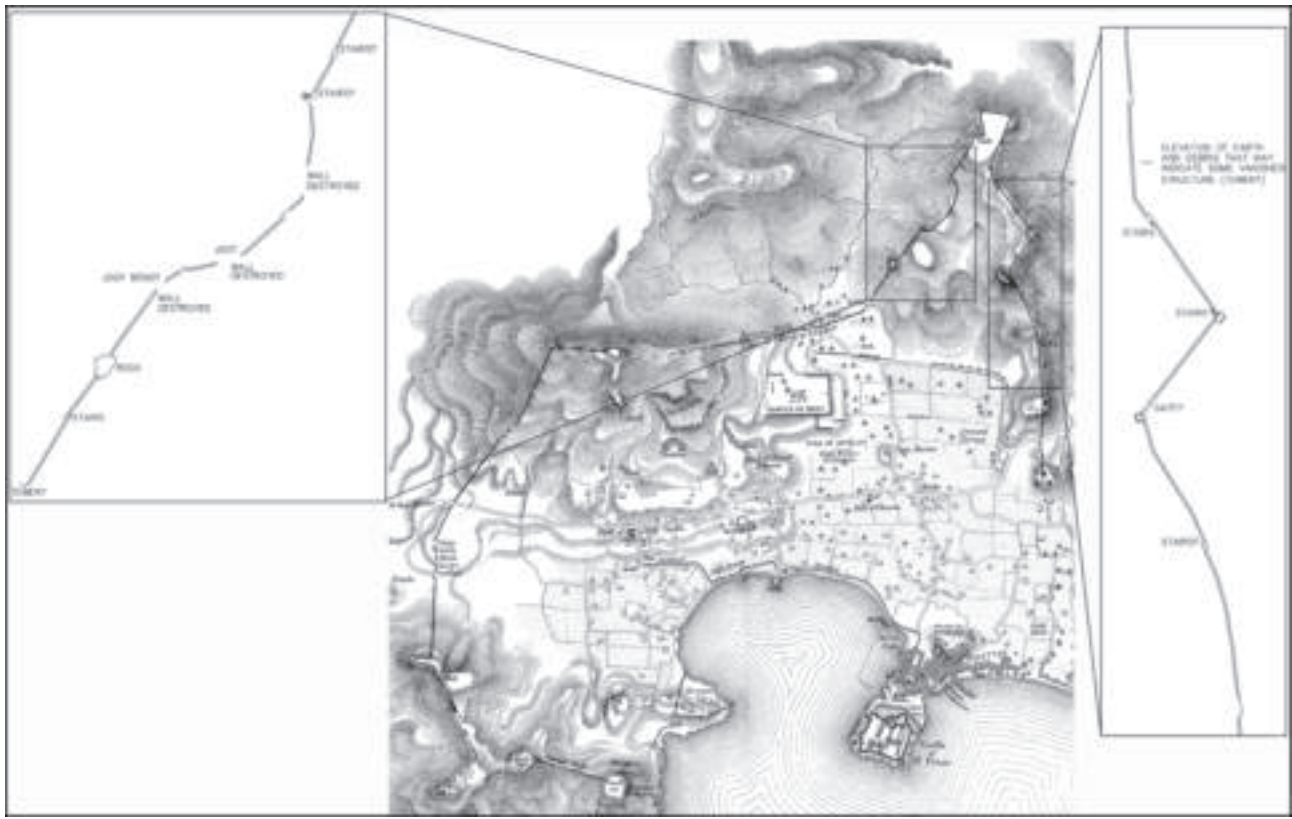


Fig. 16 C.T. Newton's map of Halikarnassos 1862 with two sections of city wall (drawings city wall: U. Ruppe)

crosswall) and Ephesos – just to mention the most prominent examples.⁵¹ Elsewhere it was obviously less popular, but still we can find isolated examples on the Peloponnese (Gortys), in Aitolia (Chalkis), in Attica (Dema Wall) and even on Crete (Itanos) – again just the most prominent examples.⁵² On the one hand, the total number might even exceed the number in Western Asia Minor, on the other hand, nowhere else but in Asia Minor can we observe such a concentration of the feature in such a limited region. But, despite the latter evidence, it is remarkable that some of the isolated fortifications outside of Western Asia Minor – such as the Gortys wall or the one at Chalkis – represent such elaborated and progressive solutions. Thus a simple line of influence from the Karian/Ionian region to certain 'hot spots' outside of Asia Minor is hardly comprehensible, especially when we lack traceable historical correlations.

On the basis of this evidence, the systematic indented trace should not be classified as a regionally confined phenomenon, but rather a regionally preferred layout.

Conclusions

In the first part of the paper Pedersen presented an architectural peculiarity – the double corner bond – that he convincingly interpreted as a phenomenon confined topographically to Western Asia Minor and chronologically to 370 to 200 BC.

The second part of the paper was intended to present a methodological test case: how far can the method of conclusion by analogy, when applied to regionally confined phenomena, help to track lines of influence

⁵¹ For the fortifications of Erythrai: Weber 1901; McNicoll 1997, 60–7; Maier 1959, 214–16. Kolophon: McNicoll 1997, 67–70; Maier 1959, 223–31; Meritt 1935, 371. Metropolis: Meriç 1982, 24–30; Meriç 2004, 45–7. Iasos (mainland wall): McNicoll 1997, 107–17. Miletos (southern crosswall): Gerkan 1935, 53–80; McNicoll 1997, 164–70. Ephesos (Büllbülđağı): McNicoll 1997, 94–101; Marksteiner 1999.

⁵² For the fortifications of Gortys: Martin 1947–8; Winter 1971, 414. Chalkis: Noack 1916, 237–9; Lawrence 1979, 351. Dema wall: Munn 1993; Jones *et al.* 1957. Itanos: Coutsinas 2011. I would like to thank Nadia Coutsinas very much for the information about Itanos that she gave me at the conference in Athens.

from one place to another? Or, to put it more concretely: can the presence or absence of analogous phenomena in the city walls of Priene and Halikarnassos help to determine the historical problem, whether the Hekatomnids of Halikarnassos supported and financed the foundation of New Priene?

The result of this brief review was rather discouraging. It could be shown that even such an evident and clearly traceable phenomenon like the DCB is only a small part of a complex system of subtle architectural phenomena that are interlinked and subject to mutual determinations. Thus, conclusions can only be drawn with extreme caution. Furthermore it could be shown that this problem is not limited to the DCB itself, but that it concerns the other interlinked phenomena of the same complex too, as well as phenomena apart of that complex, like the indented trace.

As to the question of Priene and its founders: evidently the use of the DCB at Priene is much less significant than at Halikarnassos and most other places in Western Asia Minor during this specific period. Obviously the construction principles in the two towns differ fundamentally. The significance of these observations in relation to our question is relative though – according to the conclusions drawn above. The same pertains to the parallels in the layout of the city wall as, for instance, the indented trace. It has to be stated that in terms of a better understanding of the historical background of the relocation of Priene, this brief review, unfortunately, could not get us on safer grounds.

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POLYGONALMAUERN IN MITTELITALIEN UND IHRE REZEPTION IN MITTEL- UND SPÄTREPUBLICANISCHER ZEIT

Sophie Helas

Zusammenfassung

Stadtmauern in polygonaler Technik sind aus verschiedenen Regionen des Mittelmeerraumes bekannt. Weil die Forschung den Fokus auf die Stadt Rom richtete, ist zwar wohl bekannt, dass es dort mit der servianischen Mauer eine aus Tuffquadern errichtete Aggermauer gab. Weniger geläufig ist außerhalb Italiens aber, dass in Mittelitalien, besonders im südlichen Latium, eine große Anzahl von Siedlungen und Städten mit Stadtmauern umgeben war, die aus Kalksteinen in polygonaler Technik errichtet worden waren.

Die polygonalen Stadtmauern als regionales Phänomen Mittelitaliens in der republikanischen Zeit sollen in diesem Beitrag in ihrer Gestalt und Entwicklung einführend beschrieben werden. Seit der mittleren Republik ist zu beobachten, dass diese Mauertechnik auch über den ursprünglichen Verbreitungsraum hinaus anzutreffen ist. Diese räumliche Ausbreitung des regionalen Phänomens steht vermutlich mit der Expansion Roms in inhaltlichem Zusammenhang.

Auch in chronologischer Hinsicht können wir eine Ausweitung konstatieren, da die Polygonaltechnik bis in die spätrepublikanische Zeit tradiert wird. Nun werden nicht nur Stadtmauern, sondern auch Tempelpodien und Villensubstruktionen in dieser Mauertechnik errichtet. Der handwerkliche Aufwand bei der Gestaltung der Polygonalmauern ist dabei groß, so dass der Schluss nahe liegt, dass eine bestimmte optische wie auch eine semantische Wirkung erzielt werden sollte. Für eine solche bewusste Wahl sprechen auch die Verwendung polygonaler Steine als Mauerverblendung, die ganz ihrer tektonischen Aufgabe enthoben sind, sowie die Umsetzung der Polygonalmauertechnik in Tuffstein, der sich vom Bruchverhalten her prinzipiell schlecht für einen Zuschnitt vieleckiger Steine eignet. Die Übernahme polygonaler Technik in andere Gegenden, in andere funktionale Kontexte, und die Verwendung auch in spätrepublikanischer Zeit wird als intentioneller, inhaltlicher Verweis auf ältere Mauerstrukturen Latiums, somit auf die Vergangenheit Latiums, interpretiert.

Thema und Fragestellung

Mächtige Mauern, die nicht aus rechteckigen, sondern aus polygonalen Steinen errichtet worden sind, finden sich zu unterschiedlichen Zeiten und in unterschiedlichen Gebieten des Mittelmeerraumes, denn vieleckige Bausteine entstanden beim Brechen harter Gesteine unweigerlich und wurden zum Bau einer Mauer übereinander geschichtet oder getürmt. Mit der Bezeichnung ‚polygonale Mauertechnik‘ sind aber nicht solche einfachen Bruchsteinmauern gemeint. Vielmehr zeichnet ‚Polygonalmauern‘¹ aus, dass erstens die verwendeten, vieleckigen Steine überwiegend großformatig sind, zweitens die Steine an ihren schrägen Kontaktflächen mehr oder weniger zugerichtet sind und sie drittens auf der Sichtseite mehr oder weniger geglättet sind (Abb. 1, 3).² Die Polygonalmauern sind folglich als qualitative Fortentwicklung einfacher Bruchsteinmauern zu verstehen. Es kann daher nicht verwundern, wenn ähnliche Mauern zu verschiedenen Zeiten und an verschiedenen Orten entstanden. Man denke beispielsweise an die spätbronzezeitlichen Mauern von Mykene³ und Tiryns,⁴ an die Bauten der Nuraghenkultur auf Sardinien⁵ oder an die archaischen und klassischen Mauern in Griechenland.⁶ Dennoch sind regionale und chronologische Schwerpunkte auszumachen: Stadtmauern mit diesen Charakteristika sind insbesondere in Mittelitalien und hier in den Bergregionen des heutigen Latiums bekannt (vgl. die Karte Abb. 2).⁷ Sie werden in diesem Beitrag als regionales Phänomen vorgestellt, welches in seiner räumlichen Ausbreitung und zeitlichen Stellung erfasst und interpretiert werden soll.⁸ Eine umfassende Darlegung und Beschreibung der Polygonalmauern ist hier nicht angestrebt, vielmehr wird exemplarisch gearbeitet, um



Abb. 1 Segni. Die Porta Saracena, Ansicht von der Stadtseite (S. Helas).

die Rezeptionsvorgänge darzulegen, welche die weitere Verbreitung des zunächst regional und funktional gebundenen Phänomens erklären können.

Die Polygonalmauern Mittelitaliens

Die Polygonalmauern Mittelitaliens wurden seit dem 6. bis in das 1. Jh. v. Chr. vor allem für den Bau von Stadtmauern und Terrassierungsmauern verwendet.⁹ Sie sind charakteristisch für die Befestigungen der republikanischen Zeit in *Latium adiectum*.¹⁰ In den gebirgigen Regionen der Herniker und Volsker wurden die Stadtumwehungen regelmäßig in dieser Technik errichtet, in den Küstenebenen hingegen waren Aggermauern und Tuffsteinwände aus Quadern vorherrschend.

¹ Im Folgenden werden die Begriffe ‚Polygonalmauer‘, ‚polygonale Mauer‘ und ‚Polygonalmauerwerk‘ sowie ‚Mauer in polygonaler Technik‘ weitgehend synonym gebraucht und als sprachstilistische Varianten eingesetzt. Der Terminus technicus ‚Polygonalmauer‘ bezieht sich – analog zu den Begriffen ‚Bruchsteinmauer‘ und ‚Quadermauer‘ – immer auf die Form der Steine und hat sich in der archäologischen Literatur eingebürgert. Mit den genannten Begriffen ist an keiner Stelle eine etwaige geometrische Form des Befestigungsringes beschrieben.

² Miller 1995, 17–20.

³ Mylonas 1966, 11–43 Taf. 10.20.

⁴ Müller 1930, 2–61 Abb. 38.

⁵ Contu 1974, weitere Lit. 198 Taf. 119.

⁶ Hellmann 2002, 110–2 ; Ginouvès & Martin 1985, 97–8. Taf. 22; Höcker 2004 163–6. Vgl. den Beitrag von Turgut Saner, Kaan Sağ und Ertuğ Denktaş zu den Stadtmauern von Larisa am Hermos in diesem Band.

⁷ Diese Einschätzung durch Lugli 1957, 100 hat grundsätzlich weiterhin Bestand; Polito 2011, 12–7.

⁸ Die Beschäftigung mit den Polygonalmauern Latiums ist von Dieter Mertens angeregt worden. Während meiner Referentenzeit in Rom konnte ich 2006 und 2007 viele dieser Denkmäler besichtigen. Erste Überlegungen habe ich im Rahmen des Forschungsfeldes „Grenzen“ des DAI-Clusters „Politische Räume“ vorgetragen (so auch im November 2009 in Berlin). Silke Muth, Mike Schnelle, Peter I. Schneider und Rune Frederiksen danke ich ausdrücklich für die Gelegenheit, den vorliegenden Beitrag in diesem Band publizieren zu können. – Vielfach referiere ich die Ergebnisse der italienischen Kollegen und mache diese in den Anmerkungen kenntlich. Jüngst zusammenfassend und konzise zum Polygonalmauerwerk: Tombrägel 2012, 19–32.

⁹ Tombrägel 2012, 20. Zu den Plattformen: De Haas u. a. 2011–2012.

¹⁰ *Latium adiectum*, *Latium novum*, nach Plin. HN 3.59 das Gebiet bis zum Fluss Volturno.

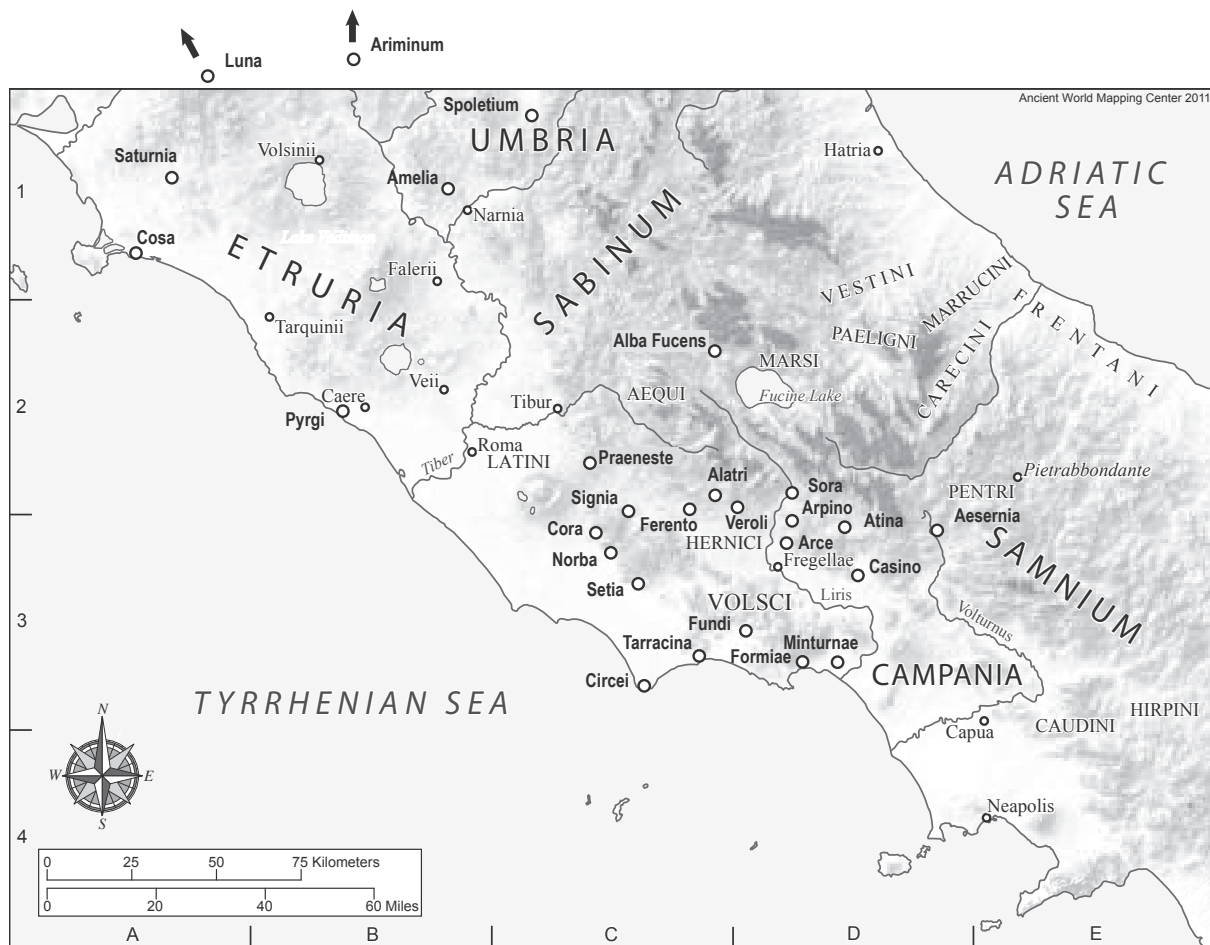


Abb. 2 Karte Mittelitaliens mit einer Auswahl an Orten, die polygonale Befestigungsmauern besitzen (S. Helas nach digitaler Vorlage des Ancient World Mapping Center 2011).

Die Polygonalmauertechnik wird aus dem Bruchverhalten des anstehenden, harten Kalksteins abgeleitet, der sich schlecht für die Zurichtung von Quadern eignet. Die Konturen der gebrochenen Rohlinge werden etwas begradigt, wodurch vieleckige Steine entstehen und wenig Material abgearbeitet werden muss, so dass der Zeit- und Materialaufwand möglichst gering gehalten wird. Während des Versetzens werden regelmäßig die Unterkanten der polygonen Steine nur an ihren Stoßflächen zurückgearbeitet und an die oberen Kanten bereits verlegter Steine angepasst. Die Auswahl zueinander passender Steine erfolgte sicherlich vor dem Versatz derselben. Manchmal werden auch die unteren bereits verlegten Steine nachgearbeitet und in das Auflager einzelner Steine eingeschnitten. Die geraden, in Latium sehr selten gekrümmten Stoßfugen bilden nur ausnahmsweise rechte Winkel, vielmehr herrschen stumpfe und spitze Winkel vor (Abb. 1, 3). Die



Abb. 3 Praeneste. Abschnitt der östlichen Stadtmauer auf Höhe der Viale Duca D'Aosta (S. Helas).

Lagerfugen verlaufen selten horizontal, sondern setzen sich meist aus einzelnen Schrägen zusammen, die durch den polygonen Zuschnitt der Bausteine vorgegeben sind. Entstehende Lücken werden dabei mit kleinen Steinen

gefüllt. In manchen Fällen bilden die Lagerflächen mehrerer Steine in der Summe annähernd wellenförmige Horizontalfugen.¹¹ Stufenartige Versprünge sind in der vertikalen Richtung und häufiger in der Horizontalen möglich.

So entsteht die charakteristische Mauertextur aus quer gelagerten, unterschiedlich großen und mittleren Formaten polygonen Zuschnitts. Die Steine sind auf der Stadtinnenseite in der Regel nicht bearbeitet. Auf der Außenseite werden die Steine mehr oder weniger aufwendig geglättet. Die Gestaltung der Schauseite sowie die Verwendung überwiegend großer Steinformate unterscheiden die Polygonalmauer von der einfachen Bruchsteinmauer ebenso wie von Mauerwerk, bei dem polygonale, beinahe rechteckige Quader annähernd horizontal geschichtet werden.¹² Somit beziehe ich mich in diesem Beitrag auf die ersten drei *maniere* in Giuseppe Lugli's Klassifikation von 1957,¹³ folglich auf Mauerwerk, das bewusst in polygonaler Technik errichtet wurde (Abb. 4).¹⁴ Das wichtigste Unterscheidungsmerkmal zwischen den *maniere*, den Polygonalmauer-Varianten, ist der handwerkliche Aufwand bei der Zurichtung und Anpassung der Steine, der sich vor allem am Fugenschluss zwischen den einzelnen Steinen ablesen lässt, und bei der Oberflächengestaltung. Die erste Variante hat wenig zugeschlagene, die zweite Variante deutlich zugerichtete und die dritte Variante sehr gut zugearbeitete Bausteine, die einen Saum und einen Spiegel besitzen können (Abb. 13). Das beschriebene Konstruktionsprinzip ist jedoch immer gleich.

Die Datierung der Polygonalmauern ist eine noch immer lebhaft geführte Debatte.¹⁵ Verschiedentlich durchgeführte Grabungen legen das Aufkommen dieser Technik in Mittelitalien im 6. Jh. v. Chr., eventuell auch bereits im 7. Jh. v. Chr.¹⁶ nahe. Die Mauertechnik wurde beim Bau von Stadtmauern bis in das 2. Jh. v. Chr. verwendet. Da die Unterscheidung in die drei Varianten vor allem auf qualitativen Unterschieden beruht, verbietet sich eine strikte chronologische Auswertung

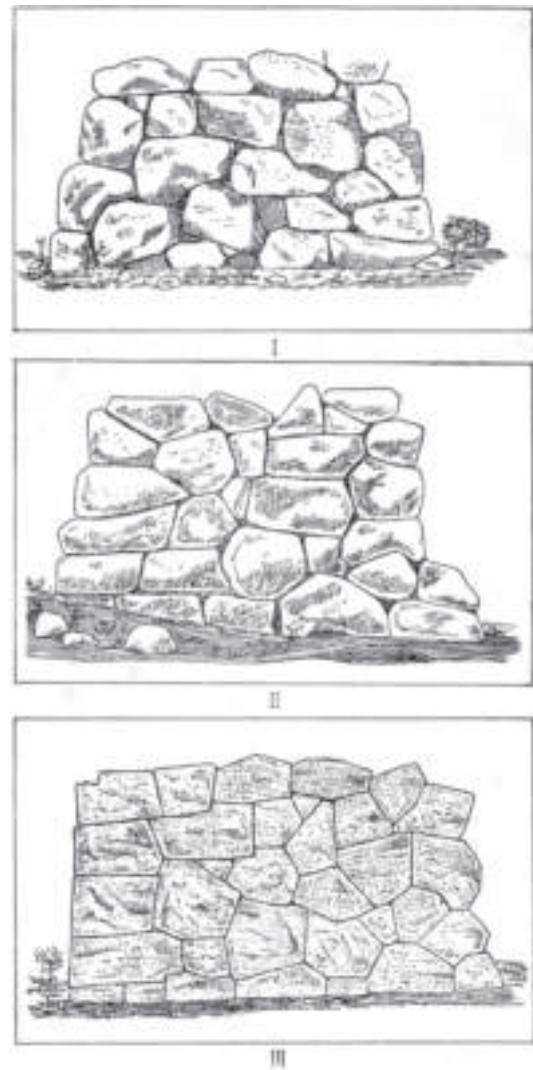


Abb. 4 Die ersten drei Polygonalmauer-Varianten nach Giuseppe Lugli (neu montierte Abb. nach Lugli 1957, 67 Abb. 1).

der Polygonalmauer-Varianten.¹⁷ Tendenziell kann jedoch eine Entwicklung vom einfachen zum aufwendigen Mauerwerk konstatiert werden.

¹¹ Beispielsweise in Arpinum; Polito 2011, 29–36.

¹² Lugli 1957, 67 Abb. 1–IV; bei Tombrägel 2012, 27 als Rustica-Mauerwerk geführt.

¹³ Lugli 1957, 67 Abb. 1. Trotz Kritik an Lugli's Klassifikation, die sich aber besonders auf eine zu starke chronologische Bindung der Technik beziehen kann, halte ich die Einteilung in diese Gruppen dennoch für hilfreich. Statt des Begriffs ‚Mauertyp‘ oder ‚Stil‘ werde ich im Folgenden ‚Variante‘ benutzen.

¹⁴ Die Lagerfugen verlaufen in der vierten *maniera* nach Lugli horizontal. Die vierte Polygonalmauer-Variante unterscheidet sich dadurch prinzipiell vom polygonalen Konstruktionsprinzip und ähnelt eher dem Quadermauerwerk; sie wird hier nicht betrachtet. Ähnlich Miller 1995, 20.

¹⁵ Coarelli 1982, 390–1; Tombrägel 2012, 22–4.

¹⁶ Tombrägel 2012, 24.

¹⁷ Polito 2011, 15.

Zur Verbreitung der Mauern in polygonaler Technik

Ausgangspunkt der folgenden Überlegungen war die Frage nach der regionalen Reichweite des Phänomens ‚Polygonalmauer‘ im genannten Zeitraum. Um das Areal zu bestimmen, in dem die Mauern auftraten und um eine Ausbreitung oder Reduzierung des Phänomens im Verlauf der Zeit systematisch zu erfassen, wäre es notwendig, die polygonalen Stadtmauern nach chronologischen Phasen zu kartieren. Eine solche Vorgehensweise erlaubt aber der derzeitige Forschungsstand nicht, denn nur wenige der Polygonalmauern sind durch Grabungs sondagen näher datiert.¹⁸ Die Stadtmauern können, wie dargelegt wurde, nicht allein anhand der Mauertechnik zeitlich eingeordnet werden, vielmehr sind die Polygonalmauer-Varianten nur als Hinweise auf die Zeitstellung zu werten.¹⁹ Eine Kartierung nach Zeitabschnitten oder nach Polygonalmauer-Varianten verbietet sich daher, weshalb die in diesem Aufsatz erwähnten Städte allein ihrer geographischen Lage nach markiert sind (Abb. 2).

Angesichts der in den historischen Quellen überlieferten Konflikte in Latium ist es gleichwohl wahrscheinlich, dass die Stadtbefestigungen als Stein gewordene Resultate der Spannungen und der kriegerischen Auseinandersetzungen zu interpretieren sind, die spätestens seit dem 5. Jh. v. Chr. die Region Mittelitaliens unsicher machten. Des Weiteren sind für einzelne Koloniestädte Gründungsjahre²⁰ überliefert, die in frührepublikanische Zeit gehören.²¹ Das Grundproblem der Datierung aufgrund von historischen Daten bleibt jedoch bestehen, denn selbstverständlich darf das überlieferte Gründungsjahr nicht vorbehaltlos auf die ältesten erhaltenen Mauern projiziert werden.²² Es ist in jedem Einzelfall zu überprüfen, in welche Phase der

Stadtgeschichte der jeweilige Mauerabschnitt gehört.²³ Obwohl archäologische Daten vielfach fehlen, ist es meines Erachtens aber nur schwer vorstellbar, dass nach einer Koloniegründung die Anlage der Mauern lange auf sich warten ließ. Die Orte in der Ebene besaßen regelmäßig Aggermauern zum Schutz ihrer Bewohner und ihrer Ressourcen.²⁴ Daher möchte man annehmen, dass auch die Orte in den Bergregionen bald nach ihrer Gründung befestigt waren. Sie wurden sehr wahrscheinlich in frührepublikanischer Zeit gegen feindliche Angriffe gesichert, da sie wohl nicht jahrzehntelang ohne Verteidigungsmauern geblieben sind. Es sind also äußere Kriterien der historischen Überlieferung,²⁵ die eine Datierung der Mauern der ersten beiden Polygonalmauer-Varianten in die republikanische Zeit, also in das 6. und 5. Jh. v. Chr., plausibel erscheinen lassen.

Die chronologisch-räumliche Perspektive: Der Export latinischer Bau- und Steinmetztechnik

Augenfällig ist die Verwandtschaft der Mauern im südlichen Latium mit denen der römischen Kolonie Cosa, nördlich von Rom an der Küste gelegen. Diese Mauern wurden in der ersten Hälfte des 3. Jh. v. Chr. errichtet (Abb. 10, 11).²⁶ Sie ähneln beispielsweise stark einigen Mauerzügen in Circei, Cora oder Ferentinum (s. u.). Es stellt sich daher die Frage, wie diese Gleichheit zu begründen ist. Warum begegnet uns die Technik im 3. Jh. v. Chr. nicht nur in *Latium adiectum*, sondern auch außerhalb dieser Region? Wie könnte sich die Übertragung des regional umgrenzten Phänomens vollzogen haben? Woher erbten die römischen Kolonisten

¹⁸ Es wäre nur im Rahmen einer lang angelegten Studie möglich und ist hier nicht zu leisten. Die Sekundärliteratur ist für den Bereich der heutigen Provinz Frosinone im Führer von Eugenio Polito aktuell zusammengestellt. Vorbildlich sind materialbegleitete Studien wie von De Haas u. a. 2011–2012.

¹⁹ Lugli selbst hat deutlich unterstrichen, dass die Mauern nicht allein aufgrund ihrer technischen Ausführung datiert werden können, Lugli 1957, 101–2. – Besonders gut zeigt sich dieses Phänomen der Gleichzeitigkeit unterschiedlicher Polygonal-Varianten an der Porta Sanguinaria in Ferentinum. Im Bereich des Durchganges sind die Steine sorgfältiger verlegt (= dritte Variante) und aufwendiger geglättet, während in der unteren Zone und weiter entfernt vom Durchgang die Steine weniger finalisiert sind (= zweite Variante). Vgl. Polito 2011, Abb. S. 55.

²⁰ Zur Problematik der Gründungsjahre vgl. Lackner 2008, 215–26, bes. 225.

²¹ Lackner 2008, 15.

²² Vgl. beispielsweise die Diskussion zu Cora, das nach Domenico Palombi älter als das überlieferte Gründungsdatum ist: Palombi 2003, 202–5. Trotzdem sind die Stadtmauern durch Grabungs sondagen um die Wende des 6. zum 5. Jh. v. Chr. datiert.

²³ So wird für das bereits 492 v. Chr. gegründete Norba von Quilici & Quilici Gigli 2001, 244 angenommen, dass die Porta Maggiore aus der ersten Hälfte des 3. Jh. v. Chr. stammt.

²⁴ Aigner-Foresti 2003, 78.

²⁵ Allgemein Cornell 1995.

²⁶ Lackner 2008, 80–6 mit ausführlicher Bibliographie.

das handwerkliche Können? Eine stadtrömische Tradition ist auszuschließen, da in Rom regelmäßig rechteckige Tuffquader zum Bau der Mauern genutzt worden sind. Es soll der These nachgegangen werden, dass es Handwerker aus den Bergregionen Latiums gewesen sind, welche die Polygonalmauertechnik in die neuen römischen Koloniegründungen gebracht haben.

Das im Folgenden entworfene Bild einer Konzentration der Polygonalmauern in der Frühzeit auf den Bereich Südlatiums und einer nicht flächenhaften, sondern punktuellen Ausweitung des Phänomens in der mittleren und späten Republik in nördlicher, östlicher und südlicher Richtung soll als ein mögliches Interpretationsmodell verstanden werden, das im Laufe der zukünftigen Forschungen überprüft werden muss. Es basiert einerseits auf Beobachtungen zur Verbreitung der tendenziell früheren Polygonalmauer-Varianten, hier der ersten beiden Varianten, und der tendenziell späteren dritten Variante, andererseits auf allgemeinen Überlegungen zur geschichtlichen Entwicklung Latiums und Roms. Die Beziehungen Roms zu den Latinern, Hernikern und Volskern dienen als Hintergrund, vor dem die Mauern, die aufgrund der Mauertechnik in diese Zeit gehören könnten, exemplarisch vorgestellt werden.

ERSTE PHASE: ROMS AUSGREIFEN NACH SÜDEN (5. JH. – CA. 338 V. CHR.)

Es werden nun die historisch überlieferten Ereignisse mit den Mauern der frühen Polygonalmauer-Varianten in einer generalisierenden Art korreliert. Hierbei wird zwangsläufig die römische Perspektive eingenommen, die auch die geschichtliche Überlieferung maßgeblich dominiert hat.

Viele Belege polygonaler Stadtmauern und zugleich das dichteste Netz von Mauern in der zweiten Polygonal-Variante finden sich in der heutigen Ciociaria, in dem Bergland südlich und nördlich des Val di Sacco, das gemeinhin als das Gebiet der Herniker gilt. Nach dem Latinerkrieg zu Beginn des 5. Jh. v. Chr. schlossen sich die Herniker im Jahr 486 v. Chr. dem sog. *foedus cassianum* an, so dass aus dem Zweierbund der Römer und Latiner ein Bündnis dreier Volksgruppen wurde.²⁷ Vermutlich kam es zeitnah zur Befestigung der einzelnen Orte der Herniker. Historisch gesehen könnten sie sowohl bereits zur Abwehr der mit den Römern verbündeten Truppen wie auch als Reaktion auf die Konflikte zur zukünftigen Sicherung dieser Orte errichtet worden sein. Verlässliche stratigraphische Daten, die eine Datierung in das 5. Jh. v. Chr. erlauben würden, sind allerdings nicht bekannt.

In den sog. Monti Ernici (Abb. 2) konzentrieren sich jedenfalls die Stadtmauern, die in polygonaler Technik errichtet wurden. Besonders eindrücklich sind beispielsweise die Stadtmauern von Arpinum²⁸ (Abb. 5), Ferentinum,²⁹ Alatrium³⁰ (Abb. 6) oder Sora.³¹ Für diese Orte mit Stadtmauern aus polygonalen Steinen ist kennzeichnend, dass die Sichtflächen der Quader zwar grob geglättet wurden, die Fugen aber nicht vollständig auf Schluss gearbeitet sind.

Nach den bei Livius überlieferten Jahreszahlen wurden zu Beginn des 5. Jh. v. Chr. die Monti Lepini, die Berge der Volsker, sukzessive mit neuen latinischen Koloniestädten belegt (Abb. 2). Bereits im Jahr 515 v. Chr. wurde Signia³² (Abb. 1), der Überlieferung bei Livius nach von Tarquinius Superbus, gegründet. Es folgten Cora³³ (Abb. 7), Norba,³⁴ Setia³⁵ (Abb. 8) und auf dem südwestlichen Vorgebirge Circei.³⁶ Diese latinischen Kolonien besetzten die Kanten

²⁷ Cornell 1995, 299–301.

²⁸ Die Stadtmauern von Arpinum werden nach Polito an das Ende des 4. Jh. v. Chr. datiert; Polito 2011, 16, 29–36, bes. 30. Eine Datierung bereits in das 5. Jh. v. Chr. halte ich wegen der altertümlichen Überkragtechnik der Porta Ogivale für wahrscheinlicher. Polito hat in seinem sehr fundierten Führer jeweils die neuste Forschungsliteratur aufgeführt. Gleiches gilt für die Zitate nach Lackner 2008, die bestens recherchiert hat, so dass ein Verweis auf ihre Publikation zur weiteren Vertiefung und Nachforschung in der Regel ausreicht.

²⁹ Quilici & Quilici Gigli 1994; Polito 2011, 48–57.

³⁰ Baldassarre 2008; Polito 2011, 21–8.

³¹ Tanzilli 1982, 64. Sora wird im Jahr 303 neu als Kolonie gegründet. Die Stadtmauern gehören aber in eine ältere Phase der Stadt. Polito 2011, 58–62.

³² Im Jahr 495. Cifarelli 2002, 12. Ungeklärt ist, ob der Stadtmauerring bereits aus dem Beginn des 5. Jh. v. Chr. stammt; Lugli 1957, Taf. V Abb. 4; Lackner 2008, 179–82.

³³ Palombi 2001, 98 mit Anm. 17; Palombi 2003, 210–11.

³⁴ Im Jahr 492. Quilici & Quilici Gigli 2001. Die Autoren datieren auch die Mauern der ersten und zweiten Polygonalmauer-Variante bis in die zweite Hälfte des 4. Jh. v. Chr. hinab; 242–7. Die dritte Variante wäre, darunter Porta Signina und Porta Maggiore, erst in die erste Hälfte des 3. Jh. v. Chr. zu datieren. Die Mauerabschnitte der zweiten Variante gehörten chronologisch zwischen diese beiden Phasen. Es entsteht meines Erachtens dadurch das Problem, dass dann Norba im 5. Jh. v. Chr. unbefestigt gewesen wäre.

³⁵ Im Jahr 382. Bruckner 2001.

³⁶ Im Jahr 393. Lackner 2008, 68–71.



Abb. 5 Arpinum. Porta Ogivale, Ansicht von der Stadtseite (S. Helas).



Abb. 6 Alatrium. Porta San Benedetto, Ansicht von der Landseite (S. Helas).



Abb. 7: Cori. Abschnitt der östlichen Stadtmauer vor der Porta Ninfina (S. Helas).



Abb. 8: Sezze. Abschnitt der südlichen Stadtmauer (S. Helas).

des Bergmassivs, so dass die Ebenen kontrolliert werden konnten.³⁷ Der qualitativen Ausführung der Mauern zufolge gehören die ältesten Polygonalmauern in den Monti Lepini ebenfalls zur ersten oder zweiten Variante nach Lugli.

ZWEITE PHASE: ROMS AUSGREIFEN NACH NORDEN, SÜDEN UND OSTEN NACH DEM ENDE DES LATINERKRIEGES (NACH 338 V. CHR. – ERSTE HÄLFTE DES 2. JH. V. CHR.)

Nachdem die Stadt Rom den südlichen Teil Latiums unter ihre direkte oder indirekte Kontrolle gebracht hatte, suchte die aufstrebende Stadt den Konflikt mit den Etruskern. Zu Beginn des 4. Jh. v. Chr. fiel schließlich

Veji an die Römer. Die Expansion nach Norden wurde durch die kriegerischen Auseinandersetzungen mit den Kelten zunächst gebremst, doch lebte der Konflikt um die Vorherrschaft in Latium um die Mitte des 4. Jh. v. Chr. wieder auf, der in einem weiteren Latinerkrieg mündete. Nach dem Entscheidungsjahr 338 v. Chr. war die Vormachtstellung Roms in Mittelitalien nun etabliert und blieb seither unangefochten. Das expandierende Rom kontrollierte das südliche Latium, band die Bewohner der Städte durch unterschiedliche Rechtsvereinbarungen an sich und begann nun, in systematischer Art auch Kolonien römischen Rechts anzulegen.³⁸

Nicht viele dieser Koloniegründungen³⁹ waren von Mauern in polygonaler Technik umgeben, doch in einigen

³⁷ Vgl. den Beitrag von Tymon De Haas & Peter Attema in diesem Band.

³⁸ Lackner 2008, 215–8.

³⁹ Vgl. die Aufstellung bei Lackner 2008, 15.



Abb. 9 Fondi. Abschnitt der nordwestlichen Stadtmauer, Viale G. Marconi (D. Baldassare).

Orten fanden sich Reste polygonaler Stadtmauern. Nachdem die älteren Siedlungen *Formiae*⁴⁰ und *Fundi* (Abb. 9)⁴¹ ganz im Süden als *civitates sine suffragio* ‚kolonisiert‘ wurden, folgte die Anlage von *Minturnae*⁴² am Grenzfluss Liris und *Aesernia*⁴³ im Hinterland. Im Osten wurde im Landesinnern *Alba Fucens*⁴⁴ gegründet, an der Adriaküste die Kolonie *Ariminum*⁴⁵, während im Norden *Cosa*⁴⁶ (Abb. 10. 11) und *Pyrgi*⁴⁷ folgten. Das Verbreitungsgebiet der Polygonalmauern weitete sich deutlich aus (Abb. 2). In später angelegten latinischen oder römischen Kolonien der zweiten Hälfte des 3. Jh. v. Chr. (*Spoletium*⁴⁸) und in der ersten Hälfte des 2. Jh. v. Chr. (*Saturnia*,⁴⁹ *Luna*⁵⁰) wurden die Stadtmauern in polygonaler Technik errichtet, selbst wenn der Grundriss der Umwehrung planmäßig als Rechteck konzipiert worden war wie beispielsweise in *Pyrgi* oder *Luna*. Bei einer Konzeption der Gesamtanlage als Rechteck würde man erwarten, dass auch für die Errichtung der Mauern Quader zum Einsatz gekommen wären, mit denen rechte Ecken einfacher zu realisieren sind. Der antike Betrachter einer solchen polygonalen Mauer konnte vermutlich sogleich auf die Erbauer zurückschließen.⁵¹ Die Annahme

liegt daher nahe, dass dieses polygonale Mauerwerk als typisch für die latinischen Kolonisten, wenn auch nicht als typisch für Rom, gegolten hat.⁵²

In diesen weiter entfernten Orten wurden die Mauern in der dritten, fortschrittlicheren Polygonalmauer-Variante erbaut (Abb. 9–11). Charakteristisch für diese Variante ist eine Perfektionierung der Technik in der handwerklichen Ausführung. Die geradlinigen Stoß- und Lagerfugen sind passgenau zugerichtet und die Ecken der oberen Steine greifen häufiger in den bereits verlegten Nachbarstein ein. Die Steine sind durchschnittlich etwas kleiner und gleichförmiger und sie haben oftmals einen dekorativen Saumschlag und einen gepickten Spiegel. Die geschlossenen Wandflächen wirken dekorativ und erfüllen zugleich den fortifikatorischen Zweck sehr gut, da man an ihnen kaum empor klettern konnte. Die jüngere, perfektionierte Variante spiegelt wahrscheinlich das gehobene handwerkliche Niveau der mittleren Republik wider, denn in den römischen Kolonien kamen die beiden ersten Polygonalmauer-Varianten beim Bau der Stadtmauern kaum mehr zur Anwendung. Es ist

⁴⁰ Im Jahr 338. Miller 1995, 376–7.

⁴¹ Ebenfalls im Jahr 338. Quadriño 1971; Carbonara & Messineo 1998, 128–31 Abb. 122.

⁴² Im Jahr 296/5. Carbonara & Messineo 1998, 148–149; Lackner 2008, 121–5.

⁴³ Im Jahr 263. Lackner 2008, 16–8 mit Anm. 11.

⁴⁴ Im Jahr 303/300. Lackner 2008, 20–6, bes. 21; Liberatore 2006.

⁴⁵ Im Jahr 268. Lackner 2008, 41–5, bes. 42 mit Anm. 20; Ortalli 2000, 501–6.

⁴⁶ Im Jahr 273. Lackner 2008, 80–6. Ebenfalls in der dritten Polygonalmauer-Variante wurden die Mauern von Orbetello erbaut: Miller 1995, 353–4.

⁴⁷ Vor dem Jahr 191. Lackner 2008, 164–5; Miller 1995, 355; Lugli 1957, Taf. × Abb. 2.

⁴⁸ Im Jahr 241. Fontaine 1990, 135–85, bes. 144 Abb. 29, 39; Lackner 2008, 189–92.

⁴⁹ Im Jahr 183. Lackner 2008, 172–4.

⁵⁰ Im Jahr 177. Lackner 2008, 113–20.

⁵¹ Die Verwendung des Kalksteins allein erklärt meines Erachtens nicht die stilistische Nähe des polygonalen Mauerwerks zu denen Südlatiens. Das Material bedingt vielleicht die grundsätzliche Verwendung von wenig zugerichteten Bruchsteinen und somit die Mauerwerksform, nicht aber die Ausführung im Detail.

⁵² Die gleiche Vermutung äußerte kürzlich erneut auch Eugenio Polito, Polito 2011, 14: „Si è così ipotizzato che l'adozione di questo tipo di muratura, sia pure favorita dalla posizione su rupi calcaree o presso cave di tale materiale, possa essere in relazione con la presenza di coloni provenienti dalle città del Lazio era già consolidata: una sorta di firma dell'identità dei coloni“.



Abb. 10 Cosa. Der Abschnitt nördlich der Porta Fiorentina, Ansicht von der Landseite (S. Helas).

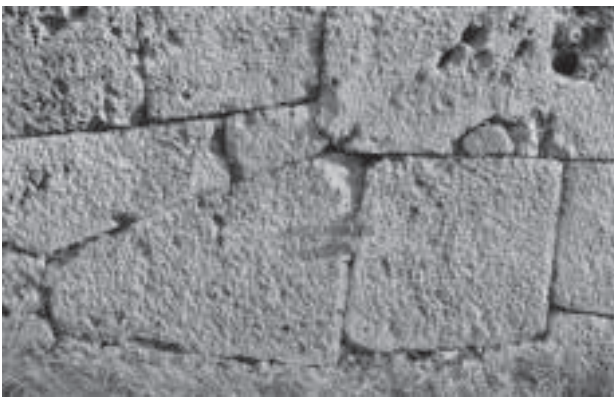


Abb. 11: Cosa. Detail mit perfektem Fugenschluss und Saumschlag (S. Helas).

daher zu vermuten, dass die perfektionierte Umsetzung der Polygonalmauerteknik chronologisch in der mittleren Republik zu verorten ist.⁵³ Die ersten beiden

Polygonalmauer-Varianten dürften folglich in die erste Phase der römischen Expansion gehören, während die dritte Polygonalmauer-Variante in der zweiten Phase nach dem Jahr 338 v. Chr.⁵⁴ aufkommt – auch wenn der Funktions- und Bauzusammenhang im Einzelfall geprüft werden muss.⁵⁵ Mit dem stadtrömischen Engagement in diesen Regionen, das auch mit finanziellen Zuwendungen verbunden gewesen sein wird, könnte auch die Qualität in der Umsetzung und Ausführung der Technik gestiegen sein.⁵⁶

Bereits Lugli vermutete, dass römische Steinmetzen im Zuge der römischen Kolonisierung die Polygonalmauer-Technik verbreiteten.⁵⁷ Diese These nahm auch Paul Fontaine auf und wollte die Stadtmauern von Amelia⁵⁸ (Abb. 12–13) in dieser Zeit der römischen Vorherrschaft entstanden sehen. Diese Deutung ist sehr überzeugend, da die Bauweise in polygonaler Technik in dieser Gegend

⁵³ So bereits Lugli 1957, 101; Tombrägel 2012, der in zwei Phasen unterscheidet, zur Chronologiediskussion (S. 24): „Das wichtigste Ergebnis der neuen Untersuchungen liegt in dem Nachweis, dass das vollendete ‚Schmuckpolygonalmauerwerk‘, welches sich durch exakten Fugenschluss und perfekte Steinglättung auszeichnet, nicht vor dem späteren 4. Jh. v. Chr. in Mittelitalien nachweisbar ist.“

⁵⁴ Polito 2011, 17 ist der Ansicht, dass die perfektionierte Polygonalmauer-Variante nicht vor dem 4. Jh. v. Chr. auftritt.

⁵⁵ Beispielsweise können Mauern zur Terrassierung von abfallendem Gelände und ohne repräsentativen Anspruch auch zu einem späteren Zeitpunkt in dem älteren, einfachen Stil errichtet worden sein; vgl. Norba, Anm. 34; Tombrägel 2012, 20–2 grundsätzlich zu den Faktoren Qualität und Funktionalität.

⁵⁶ Polito 2011, 17 hingegen betont, dass das Polygonalmauerwerk der Befestigungswerke der Zeit nach 338 v. Chr. keinen „römischen“ Charakter gehabt haben muss, sondern sich darin auch ein stolzes Eigenverständnis der italischen Städte ausgedrückt haben könnte. Ähnlich sieht es Tombrägel 2012, 25, der die Verfeinerung der Polygonalmauer-Technik mit den Repräsentationswünschen der mittelitalischen Städte in Verbindung bringt.

⁵⁷ Lugli 1957, 99–100, 101 folgt hier einer Überlegung von Giovenale 1900. Dezidiert in diese Richtung geht auch Miller 1995, 77: „Die Verwendung des Polygonalmauerwerks ist wahrscheinlich als ein bewußter politischer Akt Roms anzusehen, um auf diese Weise die Machtübernahme durch Italiker in Etrurien zu manifestieren.“

⁵⁸ Lugli 1957, Taf. V Abb. 2; Fontaine 1990, 69–94, bes. 77–8, 376.



Abb. 12: Amelia. Stadtmauer an der Porta Romana, Ansicht von der Landseite (S. Helas).



Abb. 13: Amelia. Detail mit perfektem Fugenschluss und Saumschlag (S. Helas).

Mittelitaliens zuvor nicht üblich war.⁵⁹ Die Ausbreitung der polygonalen Bau- und Steinmetztechnik ist nach diesen Beobachtungen mit der Expansion Roms zu erklären. Polygonalmauern hatten ihren Ursprung in den Kalksteinbergen Südlatioms – seien die Bauwerke nun auch ursprünglich gegen Rom oder mithilfe Roms errichtet – und verbreiteten sich mit der Ausweitung des römischen Einflusses.⁶⁰ Bei der Anlage der Mauern der neuen Kolonien könnten römische oder vielmehr von

Rom beauftragte Bautrupps aus *Latium novum* beteiligt gewesen sein, die in der Bearbeitung harter Steine und in der Errichtung großer Befestigungsringe erfahren waren.

Die baustilistische Perspektive: Die Verwendung einer altertümlichen Mauerwerkstechnik

Spätestens seit der mittelrepublikanischen Zeit werden nicht nur Stadtmauern, sondern auch Terrassen und große Podien⁶¹ in der Polygonalmauer-Technik errichtet. Das ist aus funktionalen Gründen naheliegend und aus den Bautraditionen zu erklären. In den Regionen mit anstehendem Kalkstein findet man Polygonalmauern vielfach für Villensubstruktionen,⁶² aber auch für andere Funktionsbauten wie Straßen und Brücken.⁶³

Die Verwendung des Polygonalmauerstils im sakralen Kontext

Im öffentlichen Raum erlebte das Polygonalmauerwerk besonders ab der zweiten Hälfte des 2. Jh. v. Chr.

⁵⁹ Miller 1995, 77. In Pyrgi sitzt die Polygonalmauer auf der Nordwestseite des Castrums auf einer Tuffsteinmauer aus Quadern auf. Entweder handelt es sich um eine ältere Mauer etruskischer Tradition oder aber das Polygonalmauerwerk wurde ganz bewusst aus repräsentativ-semantic Gründen auf einem Unterbau aus Tuffstein errichtet. Enei & Gentile 1999, 57–8 mit Abb.

⁶⁰ Polito 2011 14–5.

⁶¹ De Haas u. a. 2011–2012.

⁶² Tombrägel 2012, 224–5.

⁶³ Lugli 1957 Taf. XVI (Straßen); Polito 2011, 91–2 nennt z. B. die Ponte Sereno bei Ferentino.



Abb. 14 Segni. Podium des Tempels der Juno Moneta (S. Helas).

für den Bau von Tempelpodien eine Renaissance.⁶⁴ In Signia, dessen Mauern wahrscheinlich bereits in frührepublikanischer Zeit entstanden, wird in spätrepublikanischer Zeit ein neues Podium für einen Tempel der Iuno errichtet (Abb. 14).⁶⁵ Konstruiert wurde es aus Polygonalmauerwerk, das mit seinem ungewöhnlich tief angelegten Saum und den gewölbten Spiegeln die Form der Steine noch unterstreicht; das Polygonalmauerwerk wirkt dadurch manieriert. Für die Cellawand hingegen wurde Quadermauerwerk aus Tuffsteinen verwendet.⁶⁶

Das große Terrassenheiligtum von Palestrina wurde hauptsächlich aus Gussmauerwerk erbaut, doch die unteren Terrassenmauern wurden in Polygonalmauerwerk errichtet (Abb. 15–16).⁶⁷ Bei aller Modernität in der Gesamtanlage wird die alte Technik gerade an dieser Stelle mit der Absicht eingesetzt worden sein, Altertümlichkeit zu suggerieren und so auf die langen Kulttraditionen zu verweisen. In eine ähnliche Richtung deutet die Verwendung des Polygonalmauerwerks in Cosa.⁶⁸ Hier wurde im zweiten Viertel des 2. Jh. v. Chr. das in Opus caementicium gegossene Podium des Kapitoltempels mit einer Blende aus vieleckigen Steinen versehen. Die Wahl des Mauerwerks dürfte keine funktional-statischen Gründe gehabt haben, sondern ist als ein absichtlicher Verweis auf ältere Bauwerke, insbesondere die Stadtmauer, zu verstehen.



Abb. 15 Palestrina. Borgoterrasse im unteren Bereich des Heiligtums der Fortuna Primigenia (S. Helas).

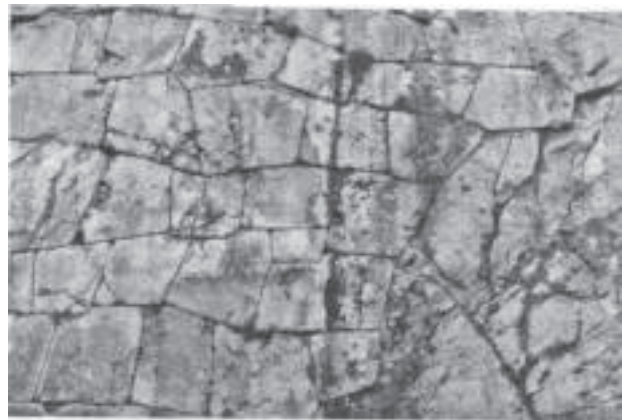


Abb. 16 Palestrina. Detail der Wand der Borgoterrasse (S. Helas).

⁶⁴ Tombrägel 2012, 26: „Neben ihrer Anwendung in der Befestigungsarchitektur, die im 3. und 2. Jahrhundert v. Chr. in immer stärkerem Maße ihre fortifikatorischen Funktionen zugunsten von urbanistischen oder repräsentativen Zwecken einbüßt, wird sie [die Mauerstilvariante des feinen Polygonalmauerwerks] vor allem im Rahmen staatlich repräsentativer und sakraler Architektur eingesetzt.“

⁶⁵ Cifarelli 2002, 40; Cifarelli 2003.

⁶⁶ Tombrägel 2012, 26 äußerte jüngst die interessante Beobachtung, dass seit dem 3. Jh. die Verwendung von Polygonalmauerwerk für das tragende Podium und von Quadermauerwerk für das aufgehende Gebäude kanonisch ist.

⁶⁷ Lugli Taf. VI Abb. 4 (rechts unten); von Sydow 1976, 360 Abb. 21; Fasolo & Gullini 1953, 52–6, 54 Abb. 71; 55 Abb. 72; Cifarelli 2003, 90; Tombrägel 2012, 26.

⁶⁸ Cifarelli 2003, 90–1 Abb. 78; Lugli 1957, Taf. XV Abb. 2.

Nach den Überlegungen von Francesco Maria Cifarelli⁶⁹ sollte das polygonale Mauerwerk neben *Stabilität* auch *Altertümlichkeit* zeichenhaft transportieren. Polygonalität war zum Stilmittel⁷⁰ geworden und nun formelhaft einsetzbar, wie auch Martin Tombrägel im Rahmen seiner Untersuchung zu den Otiumvillen von Tivoli überzeugend darlegte.⁷¹ Der semantische Gehalt ist dabei nicht leicht zu eruieren, da wir als moderne Betrachter die Perspektive des antiken Betrachters nie ganz erschließen können.⁷² Setzt man eine visuelle Erfahrung voraus, nach der polygonale Technik vor allem bei Stadtmauern verwendet wurde, wäre eine mögliche Konnotation des antiken Betrachters, mit polygonaler Technik die Qualitäten *Robustheit*, *Stabilität* und *hohes Alter* inhaltlich zu verbinden.

Die Umsetzung des Polygonalmauerstils in Tuffstein

Diese Sinnbezüge dürften es auch gewesen sein, die dazu führten, dass man die polygonale Technik auch in Tuffstein⁷³ umsetzte, der sich von seiner geologischen Beschaffenheit her prinzipiell eher schlecht für schiefe Winkel und spitze Ecken eignete.⁷⁴ Der im feuchten Zustand noch sehr weiche Stein wurde in der Regel bereits blockweise mit rechtwinkligen Kanten abgebaut. In Gabii,

ca. 18 km östlich von Rom an der Via Prenestina gelegen, wurde dennoch eine Mauer aus polygonalen Tuffsteinen erbaut, die wahrscheinlich zu einer kleinen Terrasse ergänzt werden kann (Abb. 17–18).⁷⁵ Der Mauerzug hat sich auf einer Länge von 22 m erhalten und biegt an seinem südlichen Ende rechtwinklig nach Osten um.⁷⁶ Eher unwahrscheinlich ist, dass diese Terrassenmauer als Unterbau für eine Villa diente. Der Kraterhang steigt dicht hinter der Struktur so steil an, dass ein größerer Baukörper keinen Platz gefunden hätte. Vielleicht stand auf diesem Podium ein kleines extraurbanes, zum See hin gewendetes Sacellum? Um den Anschein einer Polygonalmauer zu erwecken, wurden schräge Anschlüsse, künstliche Lücken für die charakteristischen Zwickelsteine und in den unteren Stein eingeschnittene Aussparungen für den aufliegenden Stein absichtlich konstruiert. Die Mauer ist nicht durch Sondagen datiert, doch spricht die Absicht, diesen Effekt zu erzielen, für eine Entstehung in spätrepublikanischer Zeit, in der man die unterschiedlichen Mauerstile bewusst einsetzte.

In den Gebieten, in denen Tuffgestein den natürlichen Untergrund bildete, waren in der Regel Quadermauern vorherrschend, so nicht nur in Gabii, sondern auch in Rom. Doch auch direkt vor den Toren von Rom hat sich eine Polygonalmauer erhalten, die aus Cappellaccio-Tuff besteht (Abb. 19).⁷⁷ Die Südseite der Straße nach Tibur war von einer 1,80 m hoch erhaltenen Mauer flankiert,



Abb. 17: Gabii. Ansicht der Terrassenmauer aus polygonen Tuffsteinen (Zeichnung A. Werner, Umzeichnung P. Fleischer).

⁶⁹ Cifarelli 2003, 96 erwägt, dass die Wahl des Polygonalmauerstils mit althergebrachten Traditionen und einem bewussten Rückbezug auf die eigene Vergangenheit erklärt werden könnte: „Si tratta di una scelta che sembra volersi rifare ad antiche tradizioni costruttive, che si possono immaginare sentite come parte integrante del patrimonio culturale proprio di determinanti ambienti, quale ad esempio quello di antiche città latine o di aree coloniali [...]“.

⁷⁰ Miller 1995, 125–6.

⁷¹ Tombrägel 2012, 25–6.

⁷² Tombrägel 2012, 26 betont „die semantischen Aspekte des Tragens und des ‚unter etwas Seiens‘“.

⁷³ Cifarelli 2003, 93–6 mit Abb. 87–88. Genannt sind die Villa Gammarelli bei Monte Porzio und eine Umfassungsmauer in der Gemarkung Colle Noce bei Segni. Tuffstein wird nach Lugli 1957, 101 auch in Ampulum, Tusculum, am Lago Albano und an der Via Latina verwendet.

⁷⁴ Tombrägel 2012, 20 betont, dass es in der Regel keine Polygonalmauern aus Tuff und Travertin gibt.

⁷⁵ Die Struktur ist auf dem Plan Taf. II von Guaitoli 1981 mit der Nummer 6 lokalisiert.

⁷⁶ Stefano Musco (Soprintendenza Speciale per i Beni Archeologici di Roma) ermöglichte und unterstützte unsere Arbeiten vor Ort. Das Handaufmaß führte Antje Werner, Dresden, durch, die viele Beobachtungen beisteuerte. Petra Fleischer, Bochum, zeichnete die Vorlage ins Reine. Im Herbst 2007 half außerdem Gabriel Zuchtriegel, Matera, bei der Freilegung der Mauer. Daniela Gauss, Rom, übernahm in bewährter Weise die Fotodokumentation. Allen Beteiligten sei an dieser Stelle mein Dank ausgedrückt.

⁷⁷ Ich verdanke diesen Hinweis Gabriele Cifani, der mir die Struktur beschrieb und mir freundlicherweise auch die Publikationserlaubnis für die Abb. 19 erteilte.



Abb. 18 Gabii. Detail (D. Gauss).



Abb. 19 Rom. Mauerzug an der Via Tiburtina (G. Cifani).

deren ursprüngliche Funktion und deren Zeitstellung ungeklärt sind.⁷⁸ Auch hier wurden absichtlich Bausteine aus Tuff verlegt und den Passanten wurde eine altertümliche Fassade dargeboten. Es könnte sich um eine Grundstücksmauer handeln, die zugleich das Gebiet terrassieren sollte. Was auch immer auf einer solchen Terrasse oder hinter der Wand gestanden hat: Die Umsetzung der Polygonalmauer-Technik in Tuffstein folgt hier keiner Arbeitsökonomie oder tektonischen Logik mehr, im Gegenteil werden materielle Nachteile billigend in Kauf genommen, um den Effekt einer altertümlichen Fassade zu erzielen.

Zur Ausbreitung eines regionalen Phänomens

Das Polygonalmauerwerk als regionales Phänomen Mittelitaliens breitete sich folglich auf unterschiedlichen Ebenen aus.

1. Dass es Stadtmauern in polygonaler Technik in dieser großen Anzahl in Latium gegeben hat, ist vor allem auf die Notwendigkeit zur Befestigung der im Bergland gelegenen Ortschaften zurückzuführen. Insbesondere die Auseinandersetzungen unter den latinischen Bevölkerungsgruppen, aber auch das Schutzbedürfnis gegen äußere Gefahren können für die Dichte der befestigten Orte verantwortlich gemacht werden. Wir können ab der mittelrepublikanischen Zeit die Ausbreitung des Phänomens über das Ursprungsgebiet in *Latium adiectum* hinaus nach Norden, Süden und Osten nachzeichnen und dürfen aufgrund der überlieferten Gründungsdaten als Vermittler der Bautechnik römische Kolonisten vermuten.

2. Darüber hinaus hatte das Polygonalmauerwerk bis in spätrepublikanische Zeit offenbar eine solche Ausdruckskraft, dass es auch in andere bauliche Kontexte übertragen und sogar in anderen Steinarten umgesetzt wurde. Die polygonale Technik wurde zu einem stilistischen Zeichen, das semantisch mit neuen, abstrakteren Inhalten versehen wurde: Neben Stabilität und Wehrhaftigkeit verbanden die Erbauer und Betrachter mit dieser Technik auch Altertümlichkeit und Ehrwürdigkeit.

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⁷⁸ CAR 1977, 329 Taf. 7a; Mari 2008, 164. Der Mauerzug wurde 1928 freigelegt und hat sich auf dem Gebiet der Città Universitaria bei der ehemaligen Facoltà di Fisiologia erhalten.

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CHRONOLOGIEDISKURSE ZU DEN PUNISCHEN UND RÖMISCHEN STADTMAUERN SARDINIENS

Chiara Blasetti Fantauzzi

Zusammenfassung

Auf Sardinien sind an mehreren Orten Reste von Stadtmauern erhalten, die wegen ihrer Bautechnik als punisch angesehen werden, ohne dass diese Datierung durch stratigraphische Beobachtungen gestützt würde. Einige Befestigungsanlagen seien im Zusammenhang mit der Ankunft der Karthager auf der Insel am Ende des 6. Jh. v. Chr. errichtet worden. Der Großteil der Maueranlagen soll in das 4. Jh. v. Chr. datieren. In diesem Beitrag wird versucht, die von all diesen Strukturen bekannten Daten zu analysieren, um die Hypothesen, die zu den verschiedenen Rekonstruktionen und der Festlegung eines chronologischen Rahmens geführt haben, zu verifizieren. Von besonderem Interesse ist hier auch das Ergebnis einiger neuer Grabungen in Festungen. Aus diesen Untersuchungen hat sich eine Datierung in römische Zeit ergeben. Was die älteren Phasen angeht, so gibt es, mit Ausnahme von Othoca, bis heute keine Stadtmauer auf Sardinien, die mit Sicherheit in die erste Phase der karthagischen Okkupation, d. h. an das Ende des 6. Jh. v. Chr., datiert werden könnte. Für die scheinbar bedeutende Phase des 4. Jh. v. Chr. stammen die einzigen Daten von der Mauer von Tharros.

Einleitung

Sardinien nimmt eine strategisch wichtige Position im Mittelmeer ein und verfügt über einen großen Reichtum an Bodenschätzen. Daher wurde die Insel bereits seit dem 15. Jh. v. Chr. von orientalischen Bevölkerungsgruppen aufgesucht. Seit der Mitte des 8. Jh. v. Chr. ließen sich dort Phönizier und nach ihnen, seit der Mitte des 6. Jh. v. Chr., Karthager dauerhaft nieder, wobei sie von indigenen Völkern, den sog. Nuraghen-Bewohnern, profitierten. Im Umfeld der in den Quellen genannten Mittelmeer-Anrainer erwies sich die karthagische Präsenz nach dem ersten Vertrag zwischen Rom und Karthago 509 v. Chr. als stabil und die Insel gewann unter der neuen nordafrikanischen Macht

zunehmend an Bedeutung. Die Karthager konsolidierten ihre Anwesenheit auf der Insel weiter und prägten diese besonders ab dem 4. Jh. v. Chr. 227 v. Chr. wurde Sardinien schließlich gemeinsam mit Korsika zur römischen Provinz.

Bereits in der phönizischen Periode und – archäologisch besser nachweisbar – im Zusammenhang mit der Präsenz Karthagos wurden besonders entlang der Süd- und Westküste Emporien und strukturierte Zentren gegründet. Die Störung von Stratigraphien durch Grabungen des letzten Jahrhunderts und Eingriffe während der römischen Epoche erschweren eine Rekonstruktion sowohl der städtischen Organisation solcher Zentren als auch einzelner Monumente, vor



Abb. 1 Karte Sardiniens
(Bernardini 2010, 220 Abb. 170).

allem solcher aus phönizischer und punischer Zeit. Hiervon sind auch Befestigungsanlagen betroffen, deren Verständnis bis heute Schwierigkeiten bereitet.

Auf Sardinien sind an mehreren Orten Reste von Stadtmauern erhalten (Abb. 1): in den Siedlungen am Golf von Oristano (Tharros, Othoca und Neapolis), im Süden der Insel in den Zentren von Pani Loriga, Bithia, Sulky, Monte Sirai und Cagliari sowie im Nordosten bei Olbia; dagegen sind in Nora bislang keine Spuren einer Mauer nachgewiesen. Diese Mauerzüge gehören der üblichen Datierung zufolge zum größten Teil in die punische Zeit, nur in Tharros und Othoca scheint eine phönizische Phase bezeugt zu sein.

Die Interpretation einiger Mauern Sardiniens als Reste von phönizischen Befestigungsanlagen, wie z. B. in Tharros, Olbia und Monte Sirai, basiert hauptsächlich auf der Mauertechnik aus bossierten und sorgfältig zu Quadern behauenen Blöcken – einer Technik, die oft punischen Werkstätten zugeschrieben wird.¹

Einige Befestigungsanlagen sind der Forschung zufolge im Zusammenhang mit der Ankunft der Karthager auf der Insel am Ende des 6. Jh. v. Chr. errichtet worden, wie es für Tharros, Othoca und Neapolis vorgeschlagen wurde.²

Der Großteil der Maueranlagen wird in das 4. Jh. v. Chr. datiert (Olbia, Tharros, Monte Sirai, Karales, Bithia, Nora) und soll entweder zur Verteidigung gegen Aufständische, welche die Karthager auf Sardinien und in Nordafrika bedrohten,³ gedient haben oder – ebenso wie die Anlagen in Nordafrika, die von Karthago zur Festigung seiner Vormachtstellung errichtet worden waren – zur Abwehr der vorrückenden Römer, die auf der Insel bereits die Kolonie Feronia gegründet hätten.⁴

In diesem Beitrag wird versucht, die von all diesen Baustrukturen bekannten Daten zu analysieren, um die den verschiedenen Rekonstruktionen und der Festlegung eines chronologischen Rahmens als Basis dienenden Hypothesen zu verifizieren.

Der Golf von Oristano

Die drei Städte Tharros, Othoca und Neapolis, die alle am Golf von Oristano liegen, verfügen über eindrucksvolle Überreste von Stadtmauern.

In Tharros sind an drei Stellen Befestigungszüge zutage gefördert worden: einer im Süden der Stadt, ein anderer entlang dem Osthang des Hügels, der den Turm von San Giovanni trägt, und schließlich ein weiterer im Norden auf dem Hügel von Su Muru Mannu.

An der Südküste der Halbinsel wurden eine Reihe kleiner Steine und eine Versturzschiene festgestellt, die aus den gleichen kleinen Steinen wie die Mauer bestand; der Befund gilt als Teil der phönizischen Befestigungsanlage. Die Erkenntnisse, die während der Grabungen gewonnen wurden, sind jedoch sehr vage und erlauben keine Datierung der Struktur.⁵

Am Hang des Hügels mit dem Turm von San Giovanni hingegen sind ein apsidialer Wachturm und dahinter ein Stadtmauerabschnitt aus pseudoisodometrischem Mauerwerk zu sehen. Die Reste dieser Mauer wurden in den 1960er Jahren am südwestlichen Hang des Hügels entdeckt. Derartige Mauern bestehen aus rechteckigen Sandsteinblöcken, die abwechselnd auf der Breit- und Schmalseite aufgestellt wurden. Nahe dieser Struktur hat man zugehörige, abgerundete Zinnen aus Sandstein gefunden. Mit Argumenten, die von den stratigraphischen Gegebenheiten jedoch nicht gestützt werden, wurde diese Mauerstruktur der punischen Epoche zugewiesen.⁶ Aufgrund dieser Zuordnung gelten besonders die abgerundeten Zinnen, deren Ursprung im Nahen Osten vermutet wird und die als typische Merkmale punischer Bauten mit Vergleichen in Sizilien, Sardinien und Afrika angesehen werden, als Hinweis auf den punischen Charakter der Befestigung, die in das 4. Jh. v. Chr. datiert wird.⁷

Der apsidiale Wachturm dagegen wurde am Ende der 1990er Jahre sorgfältig untersucht, mit dem Ergebnis

¹ Beispielsweise Barreca 1986, 317–8; Bartoloni u. a. 1992, 39–40.

² Acquaro 1991, 558; Zucca 1991, 1305.

³ Bartoloni 2000, 42; Marconi 2005–06, 176–7.

⁴ Mastino 2005, 46.

⁵ Barreca 1976, 216; Tore 1986, 230–1; Stiglitz 2004, 68; Mezzolani 2009, 404. Die Strukturen wurden sofort als Reste einer phönizischen Mauer zur Verteidigung des südlichsten Teils der Halbinsel, das Kap von San Marco, interpretiert, wo man fälschlicherweise die archaische Siedlung angenommen hatte: Barreca 1976, 216.

⁶ Pesce 1966, 164–6; Barreca 1986, 69.

⁷ Acquaro & Finzi 1986, 65–6.

Klarer sind die Befunde im Norden beim Hügel von Su Muru Mannu. Zunächst wurden entlang dem Nordhang des Hügels zwei Mauerzüge gefunden, in denen man Verteidigungslinien erkennen wollte; die Interpretation als Verteidigungsmauer wurde jedoch in den folgenden Jahren widerlegt. Die tatsächliche Verteidigungsmauer wurde auf der Hügelkuppe entdeckt, wo ein Graben, ein Erddamm sowie eine Mauer aus Sandstein- und Basaltblöcken zutage kamen (Abb. 2). Die Mauer verläuft in ostwestlicher Richtung und ist über eine Länge von 80 m erhalten; nach einer Biegung ist sie über weitere 35 m in nordsüdlicher Richtung nachzuweisen. In der Mauer befinden sich zwei Poternen.¹¹ Die Struktur, die max. 6 m hoch ansteht, weist eine Außenschale auf, die sich hauptsächlich aus polygonalen Basalt- und wenigen Sandsteinblöcken zusammensetzt; in der Innenschale finden sich ebenfalls Basaltblöcke, jedoch von kleineren Dimensionen.

Anhand der Mauertechnik unterscheidet Ferruccio Barreca drei Konstruktionsphasen. Zur ersten, vermutlich

archaischen Phase, gehören die Basaltblöcke, die zweite Phase ist durch die Sandsteinblöcke vertreten und in der letzten, römischen Phase kam die Verwendung von Mörtel hinzu.¹²

Auch nach der Interpretation von Enrico Acquaro zeigt die Mauer drei Phasen, sie weichen jedoch von denjenigen ab, die Barreca unterscheidet.¹³ Die erste Phase sei in das 8. Jh. v. Chr. zu datieren, als eine paleosardische Befestigung aus Basalt, die den nördlichen Teil der Siedlung begrenzte, wiederverwendet wurde. Im 6. Jh. v. Chr. (zweite Phase) sei die gesamte Anlage mit glatten und bossierten Sandsteinblöcken ausgebessert worden, wobei auch die beiden Poternen angelegt worden seien. Eine weitere Restauration (dritte Phase) sei in das 2. Jh. v. Chr. zu datieren. In diese Phase gehörten die Basaltblöcke, die mit den früheren Sandsteinblöcken verbunden seien, der Graben und der Erdwall.¹⁴ Ebenfalls in dieser letzten Phase sei auch das nahe gelegene *tophet* erneuert worden, wo ein großes Areal mit Sandsteinen gepflastert worden ist. Das Ende der Defensivfunktion

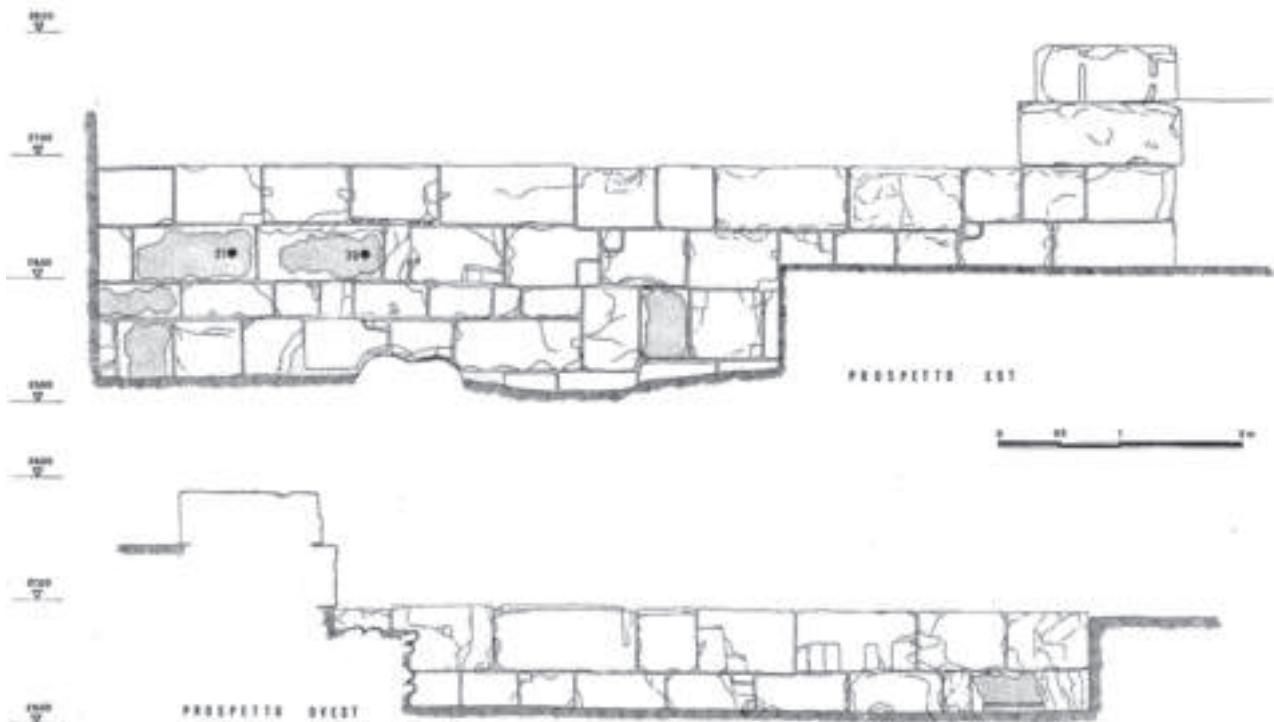


Abb. 3 Tharros. Mauer aus Sandstein auf dem Hügel von Su Muru Mannu (Acquaro & Mezzolani 1996, Abb. 19).

¹¹ Barreca 1976, 218–23; Acquaro & Finzi 1999, 46–8; Mezzolani 2009, 404.

¹² Barreca 1976, 219–23.

¹³ Acquaro 1991, 558.

¹⁴ Acquaro & Mezzolani 1996, 64.



Abb. 4 Tharros. Foto der Mauer aus Sandstein auf dem Hügel von Su Muru Mannu (Bernardini u. a. 1997, 129).

der Mauer wird durch die Verfüllung des Grabens, die Schließung der Poternen und die Anlage von Gräbern in römischer Zeit dokumentiert.

Ein wichtiges Element für die Chronologie kam bei der Freilegung eines Mauerabschnittes direkt südlich dieser Befestigung zutage. Es handelt sich um eine Mauer aus Sandsteinblöcken, die aus sakralen oder militärischen Kontexten stammen und bisweilen Spuren von Verputz tragen, sowie Blöcken mit Inschriften aus dem benachbarten *tophet* (Abb. 2.1; 3; 4). Die Mauer liegt in einem Areal, in dem sich zuvor, im 5. und 4. Jh. v. Chr., ein Handwerkerviertel befunden hat. Anhand der Verputzreste und der paläographischen Analyse der Inschriften auf Blöcken, die für die Konstruktion der Mauer wiederverwendet worden waren, ist ein *Terminus post quem* abzuleiten. Es wurde vermutet, dass diese Struktur am Ende des 4. Jh. v. Chr. errichtet wurde und im Zusammenhang mit der nahe gelegenen Stadtmauer steht, wenngleich ihre Funktion noch unklar ist. Dieser chronologische Ansatz lässt darauf schließen, dass das gesamte Gebiet im 4. Jh. v. Chr. von einer Umstrukturierung des Verteidigungssystems von Tharros beeinflusst wurde.¹⁵ Der Eingriff schloss dieses Areal ein, das zuvor als Handwerkerviertel mehreren Zwecken diente und den gesamten Sektor unmittelbar hinter der Befestigungsmauer umfasste.

Schwierigkeiten bereitet auch die Rekonstruktion der Stadtmauer von Othoca, da ein Großteil des bei den Ausgrabungen untersuchten Gebietes eine besonders komplexe stratigraphische Situation aufweist.¹⁶ Bauliche Reste, die vermutlich zu einer Stadtmauer gehören, sind in zwei Sektoren erhalten: bei der Basilika von Santa Giusta, wo man die Akropolis der Stadt annimmt, und im Bereich des heutigen Parkplatzes der Via Foscolo.

Südwestlich der Basilika von Santa Giusta kamen Mauerpartien ans Licht, die als doppelschalige archaische Stadtmauer interpretiert werden (Abb. 5).¹⁷ Die



Abb. 5: Othoca. Doppelschalige archaische Stadtmauer (Nieddu & Zucca 1991, 230 Taf. 30.1).

¹⁵ Zuletzt Mezzolani 2009, 406.

¹⁶ Tore 1983, 20–1.

¹⁷ Nieddu & Zucca 1991, 56; Zucca 1997, 92.

Innenschale dieser Struktur besteht aus rechteckigen Sandsteinblöcken, die Außenschale aus polygonalen Basaltblöcken. Der erhaltene Mauerabschnitt ist 4 m lang, 2,70 m dick und 1,09 m hoch.¹⁸

Ebenfalls bei der Basilika von Santa Giusta fand man zwei Mauersockel, die im rechten Winkel aneinander stoßen. Wegen der Mauertechnik und aufgrund stratigraphischer Beobachtungen, die jedoch noch nicht publiziert sind, wurden diese Mauerzüge generell als spätpunisch angesprochen.¹⁹

Die unter dem Parkplatz der Via Foscolo gefundene Mauer besteht aus rechteckigen Sandsteinblöcken und verläuft von Nordosten nach Südwesten. Sie wurde grob in die erste Hälfte des 6. Jh. v. Chr. datiert.²⁰

In Neapolis ist die Situation nicht weniger komplex. Dort war es möglich, anhand von Luftbildern den gesamten, sich als halbkreisförmig erweisenden Stadtmauerverlauf zu rekonstruieren.²¹ Teile der Stadtmauer sind sowohl in einem am Westrand der Stadt gelegenen Mauerzug aus polygonalen, in Trockenmauerwerk gesetzten Basaltblöcken zu sehen als auch in weiteren Mauerpartien derselben Technik, die im rechten Winkel zu ersterem stehen. Aufgrund der Bautechnik wurde der erste Mauerzug als äußere Begrenzung einer zwingerartigen Verteidigungsanlage interpretiert. Derartige Mauern werden allein wegen ihrer Technik und über Vergleiche mit anderen Befestigungen auf Sardinien an die Wende vom 6. zum 5. Jh. v. Chr. datiert.²²

In einer zweiten Phase zeigt sich die Stadtbefestigung dann als doppelschalige Mauer aus trocken gesetzten Sandsteinblöcken. Diese Art von Mauer wird, wiederum anhand von Bautechnik und Vergleichen mit anderen Stadtmauern Sardiniens, in spätpunische Zeit, d. h. in das 4. Jh. v. Chr., datiert.²³

Die gesamte Stadtmauer von Neapolis, von der wie beschrieben nur einzelne Abschnitte erhalten sind und die lediglich anhand von Luftbildern rekonstruiert

werden kann, wird also allein durch die Mauertechnik chronologisch eingeordnet.

Südsardinien

Im Süden Sardiniens sind die Befunde aus Pani Loriga und Bithia von besonderem Interesse.

Auf dem höchsten Punkt der ellipsenförmigen Erhebung aus Tuffstein stand die Akropolis von Pani Loriga. Dort wurde eine doppelte Stadtmauer entdeckt, die die flache Hügelkuppe umschloss und von Süden her betreten werden konnte. Der innere Mauerring begrenzt die Hochfläche der Akropolis mit einer Länge von ca. 100 m und einer Breite von ca. 50 m. Der Mauerring schließt auch eine ältere Nuraghe mit ein. Der äußere Mauerring, der sich max. 50 m entfernt vom inneren Ring erhob, besteht aus großen, bossierten und in Trockentechnik gesetzten Steinen.²⁴ Am westlichen und nördlichen Hügel Fuß wurden die Reste eines weiteren Mauerabschnittes entdeckt, der möglicherweise als dritter Mauerring interpretiert werden kann.²⁵

Die Stadtmauer, die bislang stets etwa in das 7. Jh. v. Chr. datiert worden ist, könnte nach jüngeren Forschungen zu Beginn des 4. Jh. v. Chr. erneuert worden sein.²⁶

In Bithia wurden erst vor kurzer Zeit einige Mauerabschnitte entdeckt, die sich im nordöstlichen Teil des Hügels von Torre Chia in einer Höhe von 20 m über dem Meeresspiegel befinden.²⁷ Der Schwerpunkt der Untersuchungen lag auf drei Mauerzügen, die in drei verschiedenen Bautechniken errichtet worden sind (Abb. 6).²⁸

Der erste Mauerzug ist in polygonalem Mauerwerk aus großen bossierten und in Trockenmauertechnik gesetzten Blöcken errichtet und besteht vielleicht aus zwei Schalen sowie einer Füllung aus kleinen Steinen (Abb. 6.a). Diese Mauer ist über eine Länge von ca. 12 m erhalten. Eine

¹⁸ Nieddu & Zucca 1991, 120.

¹⁹ Nieddu & Zucca 1991, 108.

²⁰ Nieddu & Zucca 1991, 108.

²¹ Zucca 1987, 99.

²² Zucca 1987, 99–100; Zucca 1991, 1305.

²³ Vgl. die detaillierte Beschreibung bei Zucca 1987, 99; Zucca 1991, 1305.

²⁴ Tore 1995, 242; s. jüngst Botto u. a. 2010, 11–2.

²⁵ Tore 1995, 243.

²⁶ Bartoloni 2009, 118.

²⁷ Ciccone 2001, 40–4.

²⁸ Ciccone 2001, 40–2.

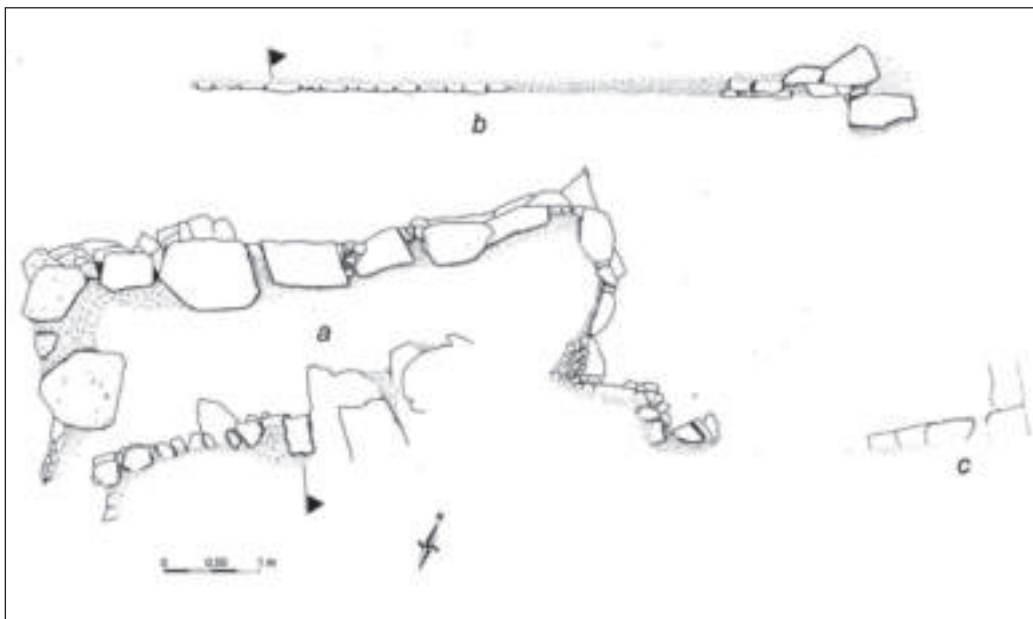


Abb. 6 Bithia. Mauerabschnitte (Ciccione 2001, 57 Taf. 3.1).

zweite Mauer verläuft parallel zu dieser in einem Abstand von 2 m (Abb. 6.b). Sie besteht auf der Ansichtsseite aus Blöcken mittlerer Größe und regelmäßiger Form, die jedoch nicht bearbeitet sind. Sie ist über 14 m nachweisbar und setzt sich weiter nördlich in besserem Erhaltungszustand fort. Die Mauer steht 1 m hoch an und besitzt drei Steinreihen. Die ersten beiden Reihen sind aus Steinquadern errichtet, während die dritte aus zwei großen, nicht bearbeiteten Blöcken besteht. Zwischen den Blöcken finden sich kleine Steine und Lehm. Der dritte Mauerzug liegt 3 m östlich des ersten und 6 m entfernt vom zweiten; er besteht aus rechteckigen, bossierten Sandsteinblöcken (Abb. 6.c). Die Zwischenräume sind mit kleinen Steinen und Erde verfüllt.

Das Fehlen stratigraphischer Untersuchungen und besonders die Ausführung der zutage gekommenen Strukturen lässt weder eine Datierung noch eine Funktionsbestimmung der Mauern zu.

Abschnitte einer Stadtmauer sind auch in Sulky an drei Stellen erhalten: auf dem Monte Cresia, nahe dem *tophet*, und im Norden auf dem Hügel der savoyischen Festung. Die sich sehr ähnelnden Strukturen bestehen alle aus bossierten, roten Trachytblöcken und wurden daher als Verteidigungsanlagen aus punischer Zeit interpretiert.

Bei den Strukturen auf dem Monte Cresia handelt es sich um Reihen aus bossierten, roten Trachytblöcken, die wegen der Mauertechnik als Teil einer – allerdings in der Antike zerstörten und neu errichteten – Verteidigungsanlage interpretiert werden. Diese bietet nur wenige Aufschlüsse über die Chronologie und die urbanistische Anlage von Sulky.²⁹

Im Norden des *tophet*, heute von Wasser bedeckt, werden bei Ebbe Mauerstrukturen aus roten Trachytblöcken sichtbar, die ein Viereck bilden und als Teil der punischen Befestigung von Sulky angesehen werden.³⁰ Im *tophet* erhebt sich außerdem ein auf den Fels gesetzter Turm und eine vermutlich punische Zisterne, die jedoch keine sicheren chronologischen Anhaltspunkte liefert. Sie wird auf das 2. Jh. v. Chr. zurückgeführt und in Zusammenhang mit der Neustrukturierung des Akropolis-Areals in dieser Zeit gesehen.³¹

Für die Datierung der Verteidigungsmauern im als ‚Akropolis‘ bekannten östlichen Sektor des Hügels der savoyischen Festung ist eine Ausgrabung von besonderer Bedeutung, die bis heute die einzige verlässliche stratigraphische Untersuchung darstellt (Abb. 7).³² Diese Grabung hatte die Analyse der Fundamentgräben zweier Mauerabschnitte zum Ziel, die aus Reihen von

²⁹ Bartoloni 1989, 38; Colavitti & Tronchetti 2000, 1322.

³⁰ Bartoloni 1989, 39.

³¹ Vgl. auch Marconi 2005–06, 175.

³² Colavitti & Tronchetti 2000, 1325–31; Marconi 2005–06, 175. Für frühere Hypothesen zu einer punischen Stadtmauer s. die Überlegungen von Bartoloni: Bartoloni 1971 und Bartoloni 1989.

rechteckigen, bossierten Trachytblöcken bestehen. Ein Ergebnis der Untersuchung war die auf dünnwandigen Keramikfragmenten basierende Datierung der Strukturen in eine Phase kurz vor der Mitte des 1. Jh. v. Chr.³³

Das Beispiel von Sulky ist bezeichnend. Die stets durch die bossierte Mauertechnik und durch Vergleiche mit anderen Zentren Sardiniens wie dem Monte Sirai als punische Mauern des 4. Jh. v. Chr. angesprochenen Strukturen erwiesen sich hier nach der Durchführung einer einzigen stratigraphischen Untersuchung als römisch.³⁴

Was die Mauern von Monte Sirai angeht, so war dieses 191 m über dem Meeresspiegel gelegene Zentrum im Norden von einem Graben und einem ellipsenförmigen Mauerring umgeben, der zu einem großen Teil um die Stadt herum erhalten ist (Abb. 8). Diesen Mauerring bildeten die Außenmauern von Wohnbauten, die so die Grenzen der Siedlung markierten und die aus unregelmäßigen, mit Lehm verbundenen Blöcken bestehen. Die Häuser und damit auch das Verteidigungssystem werden in die Mitte des 3. Jh. v. Chr. datiert. Es wurde auch eine vorausgehende punische Phase der Stadtmauer vorgeschlagen, von der drei bossierte Blöcke aus rotem Trachyt am östlichen Hang des Berges in situ erhalten sind und die ohne jeglichen stratigraphischen Anhaltspunkt in die Zeit um 380 v. Chr. datiert werden.³⁵ Weitere Blöcke, die in einem Turm verbaut sind, dem sog. Torre Cava nahe dem sog. Mastio-Tempel, sollen ebenfalls zu dieser punischen Befestigungsanlage gehört haben.³⁶



Abb. 7 Sulky. Mauerabschnitte (Marconi 2005–06, 210 Taf. 1).

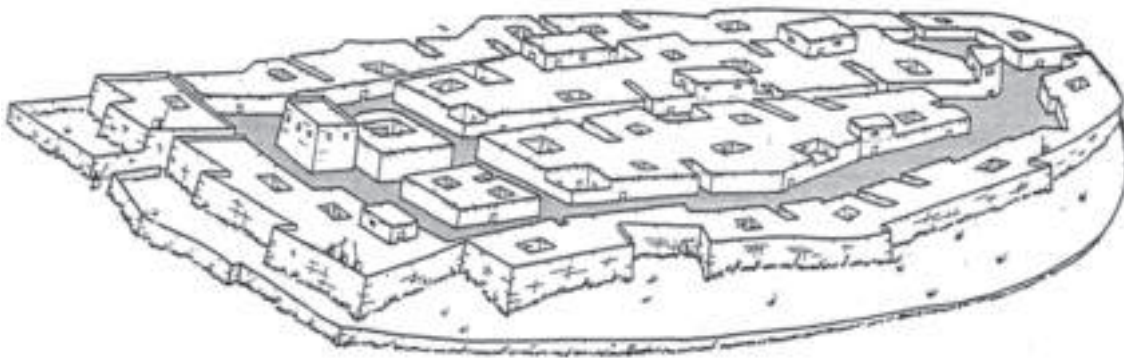


Abb. 8: Monte Sirai. Axonometrische Rekonstruktion der Stadt (Bartoloni u. a. 1992, 89 Abb. 7).

³³ Marconi 2005–06, 176.

³⁴ Colavitti & Tronchetti 2000, 1321; Marconi 2005–06, 175.

³⁵ Bartoloni u. a. 1992, 39–40.

³⁶ Bartoloni 1994, 824.

Die Stadtmauer wäre demnach in einer ersten Phase im ersten Viertel des 4. Jh. v. Chr. errichtet und später abgerissen worden, wobei ihr Material nach der römischen Eroberung wiederverwendet worden wäre.³⁷

Es ist zu betonen, dass niemals stratigraphische Untersuchungen der Stadtmauern stattgefunden haben; dennoch wurde aufgrund ‚ihres Aussehens‘ die Hypothese aufgestellt, dass es sich um Bauten aus der Zeit nach der römischen Eroberung der Insel handele.³⁸ Die Häuser, die mit der Stadtmauer eine Einheit bilden, wurden nie stratigraphisch ergraben und werden dennoch als römisch angesehen. Jeder Vorschlag einer Datierung stützt sich ausschließlich auf die Bautechnik.³⁹

Noch weniger aussagekräftig sind die Daten, die für den Mauerring von Cagliari zur Verfügung stehen, der in punische Zeit datiert wird. Einige bossierte Blöcke, die in den pisanischen Mauern auf der Anhöhe des Kastells wiederverwendet wurden, ließen ursprünglich auf eine Herkunft aus einer punischen Stadtmauer schließen. Später wurden sie Phasen, die auf die punische Zeit folgten, zugeschrieben.⁴⁰ Über einige Mauerabschnitte gibt es nur kurze Notizen. Es handelt sich um starke Mauerstrukturen aus isodomem Mauerwerk entlang dem heutigen Viale Merello und um Reste einer Mauer aus großen, bossierten Blöcken aus gelbem Tuff, die in gekrümmtem Verlauf in der Verlängerung der Via Brenta gefunden wurden und lediglich anhand nie publizierter Keramikfunde in punische Zeit datiert werden.⁴¹

Nordsardinien

Schließlich ist auch die Siedlung von Olbia zu betrachten. Die Untersuchung der Mauern dieses Zentrums fällt in die 1950er Jahre und erfolgte durch Dionigi Panedda, der auf der Basis der Arbeiten von Pietro Tamponi und Antonio Taramelli den gesamten Mauerverlauf

rekonstruierte.⁴² Abschnitte der Stadtmauer wurden in verschiedenen Teilen des bewohnten Zentrums ausgemacht, wobei besonders zwei parallele Mauerzüge im westlichen Bereich mit zwei rechteckigen Türmen sowie ein Abschnitt am nordöstlichen Stadtrand von Interesse sind (Abb. 9).

Der Abschnitt im westlichen Bereich ist über eine Länge von ca. 20 m erhalten und befindet sich nahe der heutigen Via Regina Elena im Gebiet des antiken Isciamariana. Diese Mauer wurde aus Opus quadratum unter Verwendung großer Granitblöcke (ca. 2,5 m Länge, 1 m Höhe und 1,40 m Breite) errichtet, die auf der Ansichtsseite sorgfältig bearbeitet worden sind. Einige Blöcke tragen Spuren von Bossen (Abb. 9.4).⁴³ Entlang dem Mauerverlauf wurden mit Sicherheit zwei rechteckige Türme nachgewiesen, außerdem gibt es Hinweise auf zwei weitere (Abb. 10). Zusätzlich wurde ein Turm östlich des Bergrückens von San Simele im Gebiet von Iddazzonedda entdeckt (Abb. 9.5).

Der Mauerzug, der die Stadt nach Nordosten hin begrenzt, liegt im Gebiet von Oltu Mannu im Viertel Porto Romano und ist über eine Länge von ca. 360 m erhalten.

Die Mauerzüge wurden von Panedda in römische Zeit datiert, wobei er sich im Kern auf die These von Tamarelli stützte, der die überzeugenderen Vergleiche in anderen römischen und nicht in phönizischen oder punischen Zentren fand.⁴⁴ Nach jüngeren Studien muss die Chronologie der Mauern jedoch in die punische Phase zurückdatiert werden, genauer in die Zeit des 4. Jh. v. Chr.⁴⁵ Die Technik des isodomen Mauerwerks aus bossierten Blöcken wurde als Hinweis gewertet, der diese These unterstützt. Doch nur wenige Indizien, die bei Notgrabungen der 1990er Jahre gewonnen worden sind, bestätigen diese Datierung.⁴⁶ Eine derartige Mauertechnik kann zu Recht nicht ausschließlich als punisch angesehen werden, sondern ist auch in römischer und mittelalterlicher Zeit nachgewiesen.⁴⁷

³⁷ Bartoloni u. a. 1992, 37–40.

³⁸ Bartoloni 1994, 822; zusammenfassend s. auch Ghiotto 2004, 26.

³⁹ Bartoloni 1994, 824–5.

⁴⁰ Stiglitz 2004, 65; s. zuletzt Colavitti 2003.

⁴¹ Stiglitz 2004, 65.

⁴² Panedda 1953, 42–6.

⁴³ Nach der Beschreibung von Panedda gibt es Mauerabschnitte mit bossierten Steinen, die jedoch selten sind (Panedda 1953, 45 mit Taf. V, Abb. 1), während der Großteil der Blöcke rechteckig und auf der Ansichtsseite geglättet ist (Panedda 1953, Taf. V, Abb. 2).

⁴⁴ Panedda 1953, 46.

⁴⁵ Bartoloni u. a. 1997, 78; s. auch Ghiotto 2004, 24 und Anm. 145.

⁴⁶ D'Oriano 1997a; D'Oriano 1997b.

⁴⁷ Azzena 2002, 1101 und Anm. 10; 1106 und Anm. 25; 1107 und Anm. 27. Der Autor kritisiert die Datierung der Mauern von Olbia in punische Zeit und hebt besonders hervor, dass die Mauertechnik keinen Beweis darstellt. D'Oriano antwortet darauf, indem er die Bedeutung seiner historischen und topographischen Argumentation für die Datierung der Stadtmauer in punische Zeit unterstreicht: D'Oriano 2005.

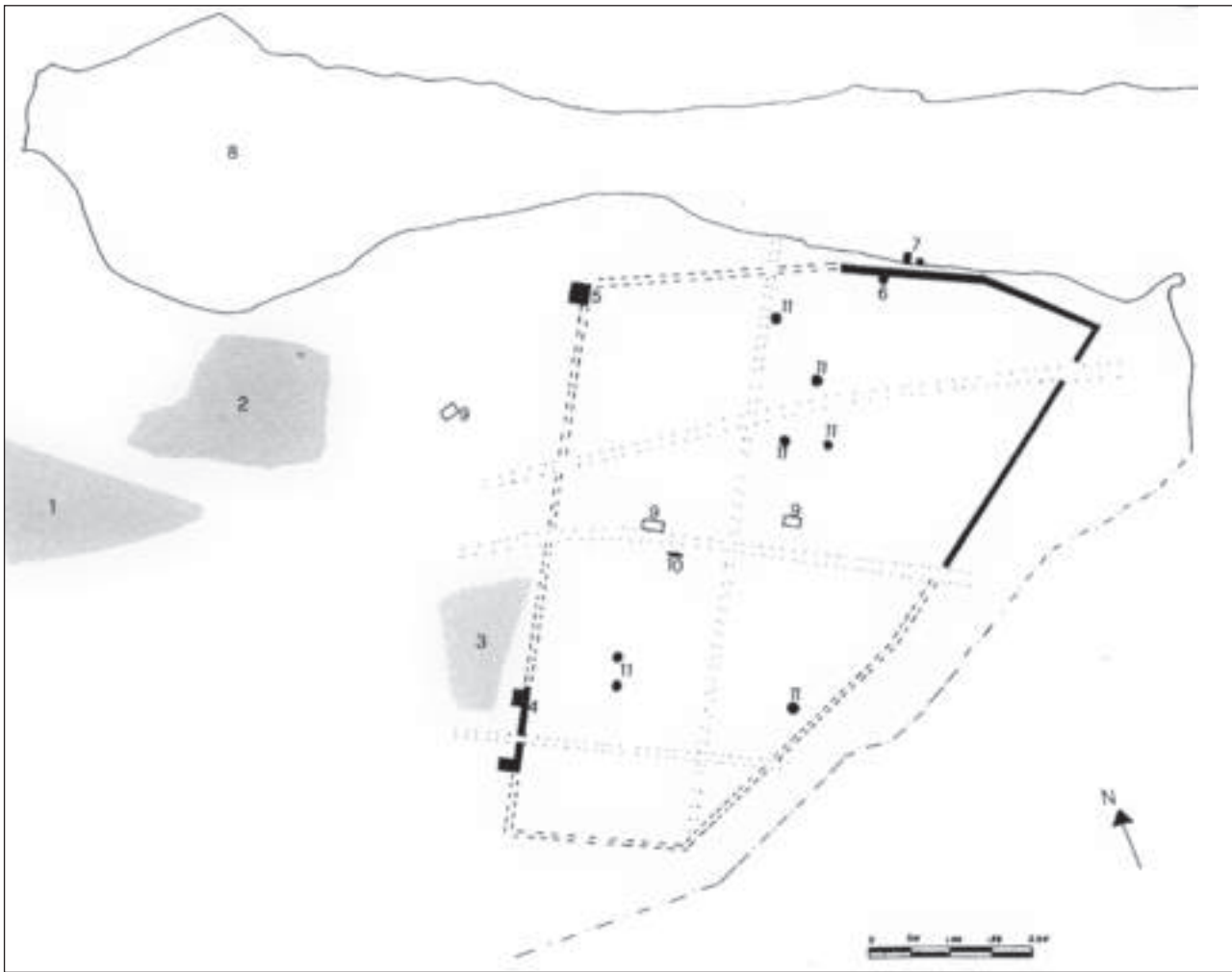


Abb. 9 Olbia. Stadtplan (Gaudina 1997, 13 Abb. 8).

Die Datierung der Stadtmauer basiert also bis heute vornehmlich auf historischen und topographischen Überlegungen. Der punische Mauerring entspricht demjenigen, den Panedda entdeckt hat.⁴⁸ Es wurde in diesem Zusammenhang darauf hingewiesen, dass der punische Mauerring diesem Verlauf folgen musste, da zum einen im gesamten von dieser Mauer umschlossenen Stadtgebiet punische Keramik zutage gekommen ist und zum anderen keine Spuren einer anderen Stadtmauer innerhalb oder außerhalb dieser Mauer gefunden worden sind.⁴⁹ Es handelt sich also um Erklärungen, die kaum überzeugen können.

Als zugehörig zu den Verteidigungsanlagen wurden auch die rechtwinkligen Strukturen aus großen, rechteckigen



Abb. 10 Olbia. Reste eines Mauerturms (Gaudina 1997, 9 Abb. 4).

⁴⁸ Zuletzt D'Oriano 2009, 375.

⁴⁹ D'Oriano 2005; zuletzt D'Oriano 2009, 375.

Granitblöcken interpretiert, die sich am südlichen Ufer der Bucht von Porto Romano befinden und heute nur bei Ebbe sichtbar sind (Abb. 9.7). Nach Panedda handelt es sich hier um die Reste einer römischen Mole, die von einer Uferbefestigungsmauer ins Meer hinaus ragte; diese wird als Becken interpretiert, das wenige Meter weiter im Norden des nördlichen Mauerabschnittes lokalisiert ist. Nach Rubens D'Oriano sind die beiden Strukturen wegen ihrer Dimensionen und der Bautechnik hingegen als Türme zu interpretieren und folglich mit der Stadtmauer zu verbinden; sie könnten ein Tor flankiert haben.⁵⁰ Die Verbindung dieser Strukturen mit der Stadtmauer hat zu einer Rückdatierung letzterer in punische Zeit anstelle der von Panedda vorgeschlagenen römischen Datierung geführt.⁵¹

Die punische Datierung derartiger Strukturen wurde in Zweifel gezogen, da man in einem Steinbruch Spuren von Keilen entdeckt hat, die auf eine typisch römische Technik hinweisen.⁵²

Das Fehlen weiterführender Untersuchungen erlaubt es nicht, die vorgestellten Argumentationen zu überprüfen, die folglich weiterhin rein hypothetisch bleiben müssen.

Für Nora, eines der größeren und besser bekannten punisch-römischen Zentren Sardinien, sind die Daten, welche die Stadtmauer betreffen, wenig aufschlussreich. Es wurde nur eine zweischalige Mauer gefunden, die den nordwestlichen Hang des Hügels der Tanit umgibt und die als Teil einer Stadtmauer interpretiert werden kann. Es ist jedoch nicht auszuschließen, dass es sich hier stattdessen um Reste des Tempels handelt, der auf der Hügelkuppe stand.⁵³

Fazit

Die Analyse hat gezeigt, wie komplex und schwierig ein Interpretationsversuch der Verteidigungsanlagen in den sardischen Zentren bis heute ist. Die Situation wird erheblich erschwert durch die sehr schlechte Dokumentation, die in einigen Fällen fast unverständlich

ist, und durch das häufige Fehlen von Ausgrabungen. Anhand der vorgestellten Daten wurde dennoch versucht, eine Synopse der Stadtmauern auf Sardinien herzustellen. Daraus geht hervor, dass viele Datierungen sardischer Maueranlagen lediglich wegen ihrer Bautechnik als punisch eingestuft werden, ohne dass diese Datierung durch stratigraphische Untersuchungen gestützt wird.

Angesichts dieser Beobachtung kann man schließlich feststellen, dass bis heute keine Stadtmauer auf Sardinien in die Zeit der Phönizier oder in die erste Phase der karthagischen Okkupation, d. h. an das Ende des 6. Jh. v. Chr., datiert werden kann. Lediglich die Mauer von Othoca, die doppelschalig aus Basalt- und Sandsteinblöcken errichtet wurde, stammt aus dem 6. Jh. v. Chr.

Außerhalb Sardinien sind gut erhaltene phönizische Verteidigungsanlagen insbesondere auf Mozia im westlichen Sizilien bezeugt. Dort wird die erste Phase der Stadtmauer in die Mitte des 6. Jh. v. Chr. datiert. Sie besteht aus trocken gesetzten Steinen von geringer bis mittlerer Größe und ruht doppelschalig auf einem Sockel aus Lehmziegeln. Während der zweiten Phase, also am Ende des 6. Jh. v. Chr., behielten die Mauern von Mozia ihre doppelschalige Struktur mit einem aufgehenden Mauerwerk aus Lehmziegeln, wobei der Sockel mit Felsblöcken verstärkt wurde.⁵⁴ Meines Erachtens ist es auch für die Mauer von Othoca, die immerhin noch bis zu 1,09 m Höhe erhalten ist, keineswegs ausgeschlossen, dass die zweischalige Struktur einst ein aufragendes Mauerwerk aus Lehmziegeln besaß. Anhand der Bautechnik mit Lehmziegeln könnte das Fehlen von Befestigungsmauern der ältesten Phasen der übrigen Siedlungen erklärt werden. Auch bezüglich der punischen Phase des 4. Jh. sind die archäologischen Daten sehr spärlich. Jüngst wurden jedoch die Datierungen dieser Mauern in das 4. Jh., insbesondere von Monte Sirai und Olbia, die sich nur auf die Beobachtung der Bautechnik und nicht auf stratigraphische Ausgrabungen stützten, ohne Kritik bestätigt.⁵⁵ Angesichts dieser Forschungen sowie älteren Hypothesen zufolge wäre ein komplexeres karthagisches Befestigungssystem auf Sardinien vorstellbar. In diesem Zusammenhang ist

⁵⁰ Vgl. D'Oriano 1998, 808.

⁵¹ Panedda 1953, 59; Gaudina 1997, 10; D'Oriano 2009, 378.

⁵² Massimetti 1990, 793.

⁵³ Bondi 1992, 115; Botto 2007, 131. Über die Strukturen, die Giovanni Patroni auf dem Hügel von Coltellazzo entdeckt hat, lässt sich keine Aussage treffen, ebenso wenig über die Reste eines Turms mit quadratischem Grundriss: Patroni 1904, Sp. 125–130; Ghiotto 2004, 25 und Anm. 153.

⁵⁴ Zuletzt De Vincenzo 2013, 132.

⁵⁵ Díes Cusí 2008, 73–6.

in Monte Sirai eine nicht massive Befestigungsanlage ohne Türme vorgeschlagen worden.⁵⁶ Diese sei als Zeichen einer direkten Kontrolle der Insel durch Karthago anzusehen, dessen punische Städte sich vor den Nuraghen-Indigenen einfach verteidigen konnten.⁵⁷ Aber nur in Tharros können Mauerreste mit Sicherheit in das 4. Jh. v. Chr. datiert werden und meines Erachtens lassen diese nach dem heutigen Forschungsstand keine Rekonstruktion eines komplexen Befestigungssystems Karthagos auf Sardinien zu.

In Bezug auf die römische Phase haben neue archäologische Ausgrabungen in Sulky gezeigt, dass im Gegensatz zur älteren Forschungsmeinung die Mauern aus rechteckigen, bossierten Trachytblöcken im östlichen Sektor der ‚Akropolis‘ kurz vor der Mitte des 1. Jh. v. Chr. errichtet wurden.⁵⁸ Ihre Mauertechnik ist in Sardinien weit verbreitet und wurde bislang als typisch punisch angesehen. In diesem Zusammenhang ist auch ein Vergleich mit den spätrepublikanischen Mauern von Cossyra aufschlussreich, die in der gleichen Technik errichtet wurden und durch die letzten Untersuchungen an das Ende des 1. Jh. v. Chr. zu datieren sind.⁵⁹ Es kann also mithilfe der stratigraphischen Daten Sardiniens sowie anderer Mittelmeer-Kontexte vorgeschlagen werden, dass die Mauern aus rechteckigen, bossierten Trachytblöcken in die Phase nach der römischen Eroberung der Insel zu verorten sind. Bezeichnend für dieses Phänomen einer punischen Datierung der römischen Mauern Sardiniens ist das Fallbeispiel der Mauerreste entlang der Hänge des Hügels von San Giovanni in Tharros, die stets für punisch gehalten wurden. Die Untersuchungen haben jedoch gezeigt, dass ihre Errichtung in die mittlere Kaiserzeit fällt.

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⁵⁶ Díes Cusí 2008, 74–5. Hierfür sind die Mauern von Olbia von Bedeutung, deren Datierung in das 4. Jh. v. Chr. sich nicht auf archäologische Beobachtungen stützt und trotzdem in den älteren Hypothesen als Kern eines Befestigungssystems gegen Rom vorgeschlagen wurde.

⁵⁷ Díes Cusí 2008, 75.

⁵⁸ Marconi 2005–06, 176. Zuletzt ist vorgeschlagen worden, dass sich die römischen Umarbeitungen der Mauern nur auf die Verbreiterung oder das Anlegen von Verteidigungsgräben beschränkten: Díes Cusí 2008, 77.

⁵⁹ Zuletzt De Vincenzo 2013, 157.

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GRAECO-ROMAN *POLIORKETICS* AND THE DEVELOPMENT OF MILITARY ARCHITECTURE IN ANTIOCHIA HIPPOS OF THE DECAPOLIS AS A TEST CASE

Michael Eisenberg

Abstract

There are a considerable number of ancient sources describing with great precision the preparations for a siege and siege warfare from the end of the 5th century BCE until the 1st century CE. Descriptions of the various sieges provide important information regarding the system of fortifications, their scope, strength and the alterations carried out during the course of the siege. The surveys and excavations carried out in a number of Decapolis cities make it clear that some cities retained the tradition of Hellenistic fortifications that were maintained and/or reinforced during the Roman period. In the course of the excavations conducted in Hippos of the Decapolis on the eastern side of the Sea of Galilee, a number of fortified segments of the Early Roman period were exposed that had very unique characteristics. Hippos can serve as a fascinating test case for the alterations in military architecture in the Decapolis region between the Hellenistic and Early Roman periods. Some of these new findings allow us to try and correlate between the recommendations of Philon in his *Poliorketika* with the urban fortification systems in the region, and to assume for the first time that Philon's manual served as the guidebook for the military architects fortifying their cities during the Early Roman period.

Introduction

The Greek term Decapolis (Δεκάπολις), which means ten cities, appears a number of times in various historical sources.¹ In all the references to it there is no clear indication that this is a city league (συνμαχία) but merely a regional affiliation – *Regio Decapolitana*. It was the very location of the cities within a given geographical area

and the uniformity of their Greek-Hellenistic culture that created the affinities among them. All the Decapolis cities were situated to the east of the Jordan River except for Beth Shean (Nysa-Scythopolis). The region of the Decapolis stretched from Dion in the north, to Philadelphia in the south and from Beth Shean in the west, to the desert fringe in the east (Fig. 1).

¹ For the Decapolis see Parker 1975; and a series of articles dedicated to the Decapolis region in *ARAM* 4 (1992).



Fig. 1 Map of the Decapolis region (drawn by: M. Eisenberg & A. Regev Gisis).

Remains of Hellenistic or Roman fortification systems were found in only a few of these ten cities of the Decapolis, i.e. Gadara, Philadelphia, Hippos and Gerasa. Most of them were erected during the Ptolemaic or Seleucid periods in the tradition of Hellenistic cities. One rarely found a Hellenistic city unfortified, and this

is certainly true of the region in question that served for many long years as an arena of warfare between the two kingdoms. We possess historical testimonies, whether direct or indirect, that some of the fortified cities in the Hellenistic period withstood a siege with greater or lesser success. In Gadara, Philadelphia, Hippos and

perhaps Abila as well, remains of urban fortifications of the Hellenistic period were discovered.²

Some of the fortifications of the Hellenistic period were destroyed during Hasmonean times or close to the time when Pompey conquered the area. Yet, some of the cities were restored, continuing their urban existence and even expanding and flourishing during the period of *Pax Romana*. In the Early Roman period, the remains of the Hellenistic fortifications were used in accordance with the city needs and the state of preservation of the earlier fortifications.

One of the Decapolis cities excavated recently is Hippos (Sussita). The excavations of Antiochia Hippos, also known by its Aramaic name – Sussita, which means a horse or a mare, were initiated in the year 2000. During 16 seasons of excavations (2000–2015) some of Hippos’

military architecture was unearthed and studied.³ Among the main features to be discussed here are the eastern gate and the bastion dated to the Early Roman period and Hippos’ outworks.⁴

The choice of the site

The Sussita Mountain is located on the south-western slopes of the Golan Heights, about 2 km east of the shores of Sea of Galilee (Lake Kinneret) (Fig. 2). The mountain rises to a height of about 350 m above the lake and about 200 m above its surroundings, making it rather dominant in its area (Figs 3–4). The crest of the mountain is long and narrow in shape, descending slightly from east to west, from 142 m ASL (above sea level) on the eastern side, to 100 m ASL on its western side. The length of the



Fig. 2 Orthophotograph of Sussita Mountain and its vicinity, February 2012 (Ofek Aerial Photography).

² Gadara: Hoffman & Bührig 2000; Hoffman & Kerner 2002, 98–105; Philadelphia: MacAdam 1992, 27–32; Wood 1992, 105–6; Abila: Wineland 1996, 80; Wineland 2001, 29–30 (one may note that evidence for urban fortifications in Abila are still far from being proven).

³ For the full reports and publications of Hippos excavations see: Segal *et al.* 2004; Segal & Eisenberg 2005a; Segal *et al.* 2005b; Segal *et al.* 2006; Segal *et al.* 2007a; Segal & Eisenberg 2007b; Segal *et al.* 2008, Segal *et al.* 2009; Segal *et al.* 2010 and Segal *et al.* 2013. Hippos Excavation project is an international enterprise conducted on behalf of the Zinman Institute of Archaeology, University of Haifa, Israel. Between the years 2000 and 2011 the project was directed by Arthur Segal and Michael Eisenberg. As from 2012 the project is directed by M. Eisenberg.

⁴ For an in-depth study of the military architecture of Hippos see: Eisenberg 2008 and Eisenberg 2013.



Fig. 3 Sussita Mountain as seen from the Sea of Galilee (photo. M. Eisenberg).



Fig. 4 Sussita Mountain. View from the Golan Heights. Note the location of the ditch in the middle of the saddle marked with an arrow (photo. M. Eisenberg).

crest is about 550 m along a south-east–north-west axis, a maximum width of about 220 m along a north–south axis on the western side, a width of about 150 m at the middle of the crest, and down to about 50 m in width on its eastern side (Figs 5–6).

The mountain is almost cut off from the surrounding area by three riverbeds that flow around it. On the southern side is the Sussita stream (Wadi Jamusiyeh), in the north is the Ein-Gev Stream (Wadi Fik) and Noa stream cuts along the saddle and mountain on the eastern side (Figs 2, 4–5). On the western side, the mountain slopes toward the Sea of Galilee with a twisting snake-like path leading down the mountain side (Figs 2–3, 5). In one place only,

on the south-eastern side, the mountain is not detached from its surroundings. This is where a natural saddle ridge connects Sussita with the south-western slopes of the Golan Heights (Fig. 4). It is here, quite naturally, that a paved entrance road led to the main city gate in the east. Sharp basalt cliffs crown the crest of Sussita Mountain, circling the edges of the mountain top and allowing for optimized natural defences upon which the city's fortification wall was built. These topographical features made Sussita a preferred site for the erection of a fortress that developed in time into a Hellenistic fortified *polis*.⁵ But it was not only those considerations that the Hellenistic architect had in mind, but also:

⁵ See note 6.



Fig. 5 Sussita Mountain. Aerial photo from the west (photo. M. Eisenberg).

- Hippos lies about mid-way on the eastern bank of the Sea of Galilee.
- It is the only prominent plateau in this region.
- It is located close to the Sea of Galilee and its anchorage.
- Nearby are the springs of Ein-Gev, Haruv and Pik.
- There was an ancient road on the east side of the Sea of Galilee.
- Fertile agricultural valleys surround the Sea of Galilee on all sides.
- The road leading to the cities of Syria runs south-east of the mountain.

All these were part of the considerations in the erection of a city upon the Sussita plateau.

Historical background

Hippos is scarcely mentioned in the historical sources. The writings of Josephus Flavius are the main source of knowledge for its history. Information about the earliest event related to Hippos comes from the Byzantine historian Syncellus, who lists Hippos as one of the cities (or more precisely as one of the 'Macedonian colonies' (*apoikiai*) that Alexander Jannaeus conquered in Transjordan in addition to Pella, Gadara, Abila, Dion and Philoteria (Syncellus *Corpus scriptorum historiae Byzantinae* 558–9). It is very likely that following the Battle of Panias (c. 200 BCE), the Seleucids took over the entire Syro-Palestine region and apparently set their own fortress upon Sussita Mountain.⁶ Judging by the archaeological evidence, it may well be that around the middle of the second century BCE the *polis* of Antiochia Hippos was founded.⁷

Hippos was conquered by Alexander Jannaeus, most probably during his first campaign in 101 BCE. The city was destroyed and was rebuilt and resettled only after Pompey's conquest of the region in 63 BCE (Flavius Josephus *BJ* I, 156–7; *Ant. Jud.* XIV, 75–6). During the Roman period the city flourished as did most of the cities of the Decapolis, and only during the Great Revolt (66–73 CE) did it feel endangered by the Jewish uprising in the Golan and Galilee regions.⁸

The fortification wall

The walls that are discernible today along the cliff edge of Sussita Mountain are mostly dated not earlier than the Byzantine period. However, the line of the walls follows the line of the cliffs as the previous fortifications must also have done (Figs 6–7). This means that the length of the wall during the Hellenistic and Roman periods could not have been very different from Byzantine times, totalling about 1550 m. No evidence was found for fortifications of the earlier Hellenistic period that could have been ascribed to a Ptolemaic or Seleucid fort. However, evidence appeared in the survey and excavations to prove the existence of fortifications that underwent at least six

⁶ Bar-Kochva regarded the conquest of Hippos as part of the Seleucid military strategy to conquer a string of military outposts of the Ptolemaic kingdom in the Jordan Valley, Galilee and Samaria. There is no clear evidence for Bar-Kochva's claim, but this idea is strengthened following his discussion concerning the goals of the military outposts of the Ptolemaic Kingdom and especially the ones of the Seleucids in the west and east of the Seleucid Kingdom. Bar-Kochva 1976, 35.

⁷ For the 2nd century BCE strata under the *Temenos* see Segal *et al.* 2004, 23–4, 143. For an in-depth discussion concerning the origins of the name Hippos and the early military settlement see Eisenberg 2013, figs 65–6.

⁸ Eisenberg 2008, 148–51. For an in-depth discussion on the historical geography of Hippos see Dvorjetski 2013.

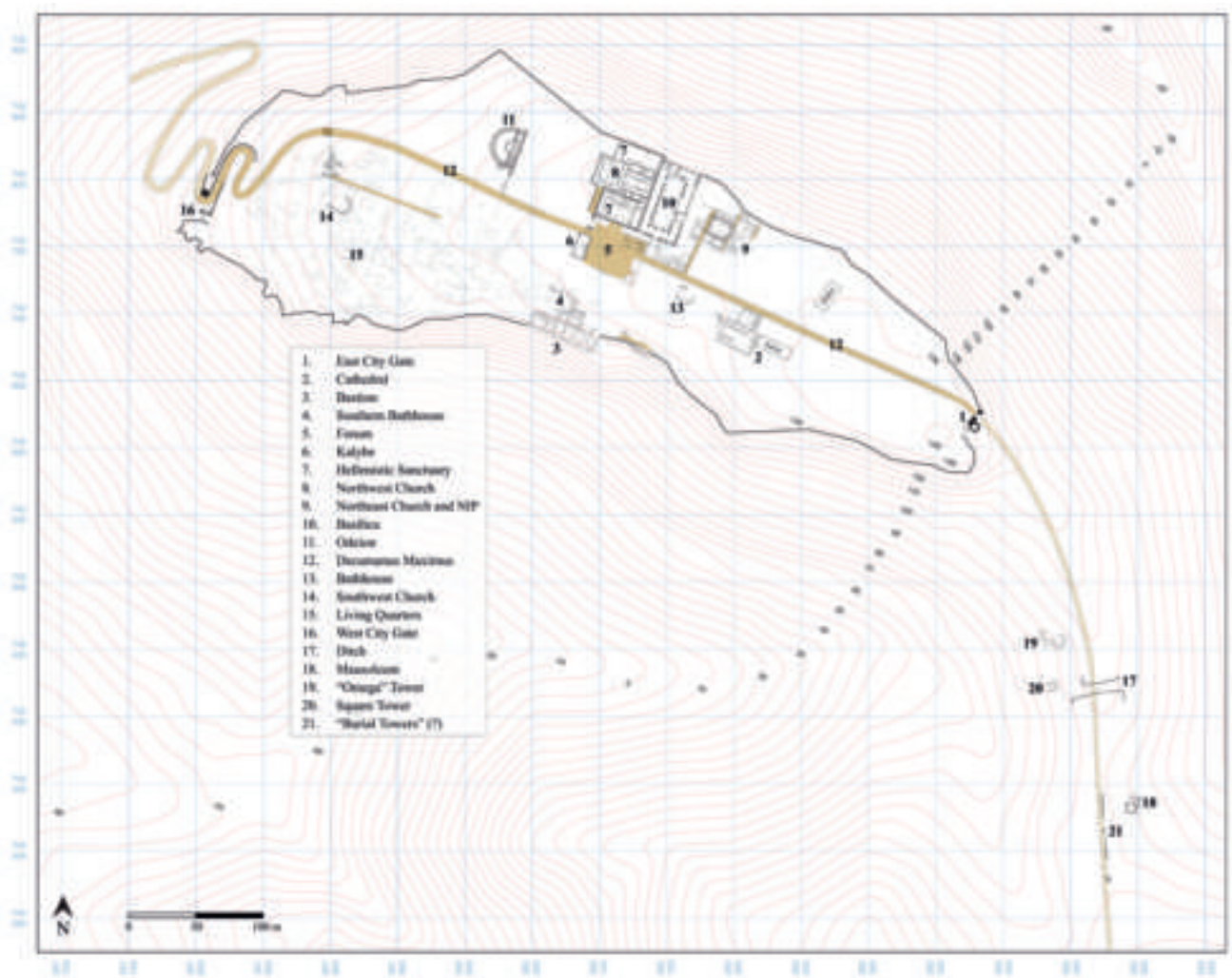


Fig. 6 Hippos contour map with ITM-Israel Transverse Mercator grid (based on Israel National Mapping Agency – SOI).

stages of construction from the late Hellenistic to the Umayyad period. The foundation trenches of the Roman fortification on the south side of the mountain cut across wall sections that date to the end of the Hellenistic period.

Three excavation areas were opened along the fortification walls, one over the north cliff and two along the southern one (Fig. 6). A segment 20 m long was opened over the north cliff where a fortification wall dating from the end of the 2nd to the beginning of the 1st century BCE was exposed.⁹ On the southern cliff an excavation of about 50 m long was opened in the middle of the cliff where a bastion was uncovered. About 25 m east of the bastion three small excavation areas were opened, comprising a total length of 30 m above the cliff (Figs 6–7).¹⁰ Those

sections along the southern cliff made it clear that the walls visible nowadays are of the Byzantine period, while short segments of fortification walls dating to the Early Roman period were exposed beneath them, except for the Roman bastion which will be dealt with in depth below.

The almost complete absence of towers is well ascribed. The few remaining nowadays, which are dated to the Byzantine period, have not yet been excavated, and we have no evidence of any Roman foundations beneath them. The only dated towers of the Roman period are the one at the east gate of the city and the one incorporated in the bastion, which will be described below. One may explain the absence of Roman period curtain towers not only by the fact that those that may have existed did not

⁹ Eisenberg 2007a, 51–6 and figs 79–87; Eisenberg 2002.

¹⁰ Eisenberg 2007b, 37–49 and figs 4, 55–67, 72–6.



Fig. 7 An aerial view towards the centre of the southern cliff. Note the fortification wall, the bastion (marked with arrows) and a series of rooms/hangars (?) beneath it (photo. M. Eisenberg).

survive, but also due to the nature of Sussita Mountain. There are almost no straight natural segments of the cliff surrounding Hippos, hence the sharp angles of the cliff and the wall upon it replaced the need for towers in many areas. Another reason is that Hippos is built high above its surroundings and had no need for the extra height of towers.

The east gate

The narrow shape of the Sussita mountain top required only two gates, one in the west and the other in the east (Figs 5–6). The western gate has not yet been excavated, it was only surveyed and measured, and its style of construction implies that it was built in the Byzantine period. The eastern gate is located at the upper end of the saddle ridge where it reaches the mountain top and from where the main street of Hippos, the *decumanus maximus* crosses through the entire length of the city. The

gate overlooks the whole stretch of the saddle ridge on which the main road to the city was paved, and this was the only place from which the mountain was more easily accessible. The saddle ridge was a natural formation that linked the mountain with the south-eastern side of the Golan Heights. This was also, quite naturally, the most sensitive area for the defenders of the city, since it was the only place where the enemy could advance his heavy war machines in an attempt to break through the gate and the city walls.

The gate has a single passageway 3.15 m wide, flanked by two towers protruding from the line of the walls on either side of it. The barrel vault archway and its position can be reconstructed thanks to the location of the wall remains in the north pier. South of the passageway was a solid round tower with an external diameter of 8.2 m, and internal diameter of 5.1 m (Figs 8–9). The thickness of the wall was 1.65 m in its lower layers and 1.3 m in the upper ones. North of the passageway was a tower that was almost square in its dimensions (3.85 × 3.63 m). This tower

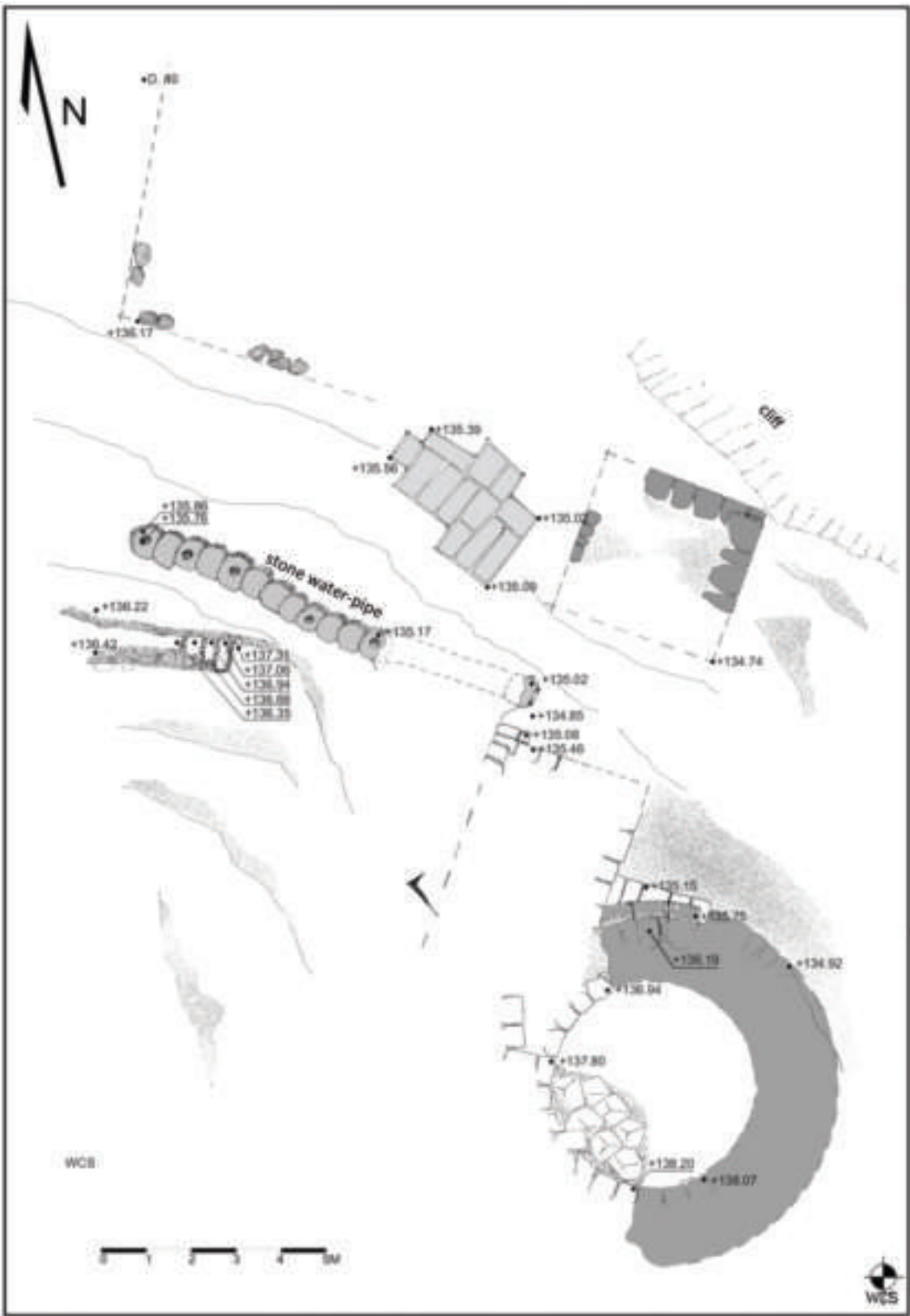


Fig. 8 The east gate, a plan (drawn by M. Ralbag).

was built at the very edge of the rocky expanse above the steep slope that descended eastwards. It appears that this square tower served as the north pillar of the gateway. The unique character of the east gate of Hippos lies in the absence of symmetry regarding the location of the two towers in relation to the gate itself and their extreme contrast in shape. A study of the terrain in the area of the gate makes it clear that this lack of symmetry was due to topographical constraints. The round tower was integrated into the city wall, while the square tower was situated on the edge of the rocky cliff with a deep abyss gaping below it, which does not create any killing field except for the narrow area near the gate passageway itself and the eastern cliff. The round tower did not only survive in a better shape than other components of the gateway structure, but it was also the dominant one when the gate was in operation. In view of its size and diameter, the round tower could have held *ballistae* or catapults' projectiles on the second or third floor. The second floor could have had a ballista machine to launch stones of about 10 *minae* (4.37 kg).¹¹ On the third floor it would have been possible to install catapult machines for launching missiles: three machines with a missile length of 2 cubits (0.92 m) or two machines with a missile length of 3 cubits (1.39 m).¹² There is a ditch in the centre of saddle ridge, about 190 m distant from the round tower. This range was enough for the machines to protect the area of the ditch and even further. Heavier ballista could have been placed on firing platforms at the base of the wall, since the superior height of the mountain top was more than sufficient.

Whoever passes through the east gate of Hippos will enter into a plaza paved with basalt flagstones, of which only 8 m² still survives. This plaza, small in size and apparently oval in shape, is a well-known feature from the gates of cities belonging to the Hellenistic period (Figs 8–9). The relatively good state of preservation of the round tower allows us to determine the details of its construction

and the architectural design and decoration of the gate structure. The round tower was built on a fairly steep slope, which made it difficult to set its lower layers securely in the uneven terrain and caused the builders to insert the foundation stones at various levels on the slope. The round tower is mostly of a dry construction with medium-sized ashlar (height: 0.3–0.4 m; width: 0.2–0.9 m). Except for the three lower layers of the tower that will be described below, the tower was built of uniform layers of alternating headers and stretchers (Fig. 8). Binding material is evident in the foundations of the tower where they were mounted upon or placed within foundation channels in the basalt bedrock. The wall of the tower was constructed of two ashlar in thickness similar to the walls of comparable Roman towers in Tiberias and Gadara.¹³ The first layer of the round tower was mounted directly on the bedrock that had been levelled for that purpose. The second layer was built in the system of headers, with their long, narrow sides facing outwards. Over this layer a third one of semi-circular shape was placed, decorated in its upper part with a simple graded moulding (Figs 8–9). A decorative component of this kind at the bottom of the tower can be clearly seen in the 'Tiberias gate' in the western part of Gadara, as well as in the southern gate towers in Tiberias. The walls of the tower survived up to a maximum height of 2.3 m. The southern pier of the gate, as compared with the northern one, has survived up to a height of three layers. The original thickness of this pier is not sufficiently clear, but it seems to have been at least 1.5 m. Though the round towers at the gates of Tiberias and Gadara bear similarities in their manner of construction and design to the Hippos tower, the asymmetrical plan of the Hippos gate, its location on a steep terrain overlooking the main road, the single round tower incorporated into the basalt bedrock as well as with the fortification wall, and the protected inner gate plaza make the Hippos gate part of the military architecture design unlike the gates of Gadara and Tiberias (Figs 6, 8–9).

¹¹ It is reasonable to suppose that the catapult was of the Palintone Vb model of Vitruvius which was common in the Early Roman period (Marsden 1969, 43). Presumably, the new machines in the Roman period allowed for a certain reduction in their size due to improvement in the system of springs, and perhaps it was possible to station here a heavier apparatus up to 15 *minae*. For the calculation formulas, see: Marsden 1969, 25, 33–6.

¹² I suggest reconstructing here the missile launching machines of the Euthytone Va model of Vitruvius, which were common in the Early Roman period. A launcher of 2 cubits in length was 1.83 m. Marsden 1969, 43–5.

¹³ For Gadara see Hoffman & Kerner 2002, 114–15. Though the architectural decorative elements of the Tiberias Gate have not been located, the investigators of the gate concluded the gate was never intended to be incorporated in the fortification walls, neither was it built as a fortified one. For the south gate of Tiberias see Foerster 1977; Segal 1997, 86–7; Hartal *et al.* 2010. The southern gate of Roman Tiberias was newly unearthed and further excavations were held here from 2008. Following personal communication with the excavators and after analysing the remains I suggest that the 1.00 m thickness of the tower walls, their small diameter and the location of the gate itself on an almost flat terrain were never meant to bear any military function. In this aspect the south gate of Tiberias and the Tiberias gate in Gadara are rather similar. It was only during the Byzantine period that the southern Tiberias gate was incorporated in the later built curtain wall.



Fig. 9 The round tower and a suggested reconstruction of the east gate (photo. M. Eisenberg, drawn by M. Ralbag).

The city wall is integrated with the round tower, which is also integrated with the southern pier of the gate which makes it clear that all three belong to a single construction phase. According to the data in hand, it may be assumed that the gate was roofed with a barrel vault (Figs 8–9). From the few pottery sherds that were discovered during the excavation of the round tower and from a typological comparison with the gates excavated in Gadara and Tiberias, the erection of the tower can be dated to the 1st century CE.

The bastion

As mentioned above, the bastion was discovered during the excavations of the southern cliff of the city, about 50 m south of the forum (Figs 6–7).¹⁴ The choice of this excavation site was not fortuitous. An attempt was made before the excavation to determine the site where the remains of the ancient fortifications and the location of the artillery platforms for the defence of the city could be found. An examination of the aerial photographs taken by the British Royal Air Force in 1945, the modern

air survey and surveys conducted on foot, and finally a search for the vulnerable points in defence, led us to the conclusion that we had here the remains of the platform for the ancient artillery machines. At the end of the excavation it became clear that this was a bastion from the Early Roman period (1st century to the beginning of the 2nd century CE). The centre of the southern cliff was chosen as being the most probable point for the efforts of the city defenders facing the only route along which enemy forces could pass on their way to the city. This was the ancient road that led from the highway on the east side of the Sea of Galilee towards the saddle ridge of Sussita, and that crosses over the Sussita rivulet at a distance of about 250 m south of the line of the southern cliffs of the mountain.

The bastion, which was only partially excavated, was built directly above the cliff line with a total length of about 50 m (Figs 7, 10). It was mounted on the basalt bedrock, while binding material and field stones served to level its foundations on the cambered rock surface. Its foundations were constructed of a series of basalt beams 1.8 m long. A series of four chamber vaults and two towers formed the ground floor on which the

¹⁴ Although the word bastion is of French origin and its use was primarily meant to define artillery positions since the 16th century CE, in modern research this term is also used to define densely concentrated military positions since proto-historical times. I define bastion as a larger defensive position than a tower from which the heavy launchers were operated to defend a city.

upper fortifications, which no longer survive, had been built. The series of chamber vaults were enclosed by a front and back wall, with an exterior distance of 13 m, an interior of 10 m between them and about 1.6 m in thickness of walls. All the walls, like the towers and the vaults were built of high quality ashlars while the core between the chambers was built with binding material and field stones.

The western tower was constructed adjoining and to the east of the western chamber vault (vault I). In the centre and bottom part of the northern wall of the tower facing the cliff, a rectangular opening was found. It had already been planned at the first stage in the construction of the wall since it was based on an empty space created by the absence of a few basalt beams in the foundations (the depth of the opening was the same as that of the basalt beams). Two options were considered for the purpose of this doorway. It may have served as drainage for water accumulating in this section of the wall and tower, or perhaps as a *poterna*, secret doorway, since it was wide enough for a person to pass through it. Support for this latter claim can be derived from the remains of a wall that was built south of the opening and

that was apparently meant to protect it and conceal it from enemy view, exactly as Philon recommends (*Philo Poliorketika* I, 35) (Fig. 10).

Two vaulted chambers, II and IV, were partially excavated (Fig. 10). Chamber IV is the more interesting one and was excavated to a greater extent. The walls of this chamber, the eastern and western ones that supported the vault have been preserved up to their springers and even beyond them. The span was 5.9 m from the western supporting wall to the eastern one, and the full length of the chamber was 10 m. The chamber vault was covered with a mortar layer that was partially preserved and is the only remnant of the upper floor, allowing us to reconstruct the height of the chamber vaults on which the upper fortifications were raised. In the centre of the outer wall which encloses the vaulted chamber, a blocked opening was found built with a maximum span of 4.17 m, located directly upon the southern cliff. There is no access or passageway available here since the slope is extremely steep. At a later time, probably during the Byzantine period, the opening was sealed. The vaulted chambers could, of course, have remained empty, but they could also have served a number of functions such

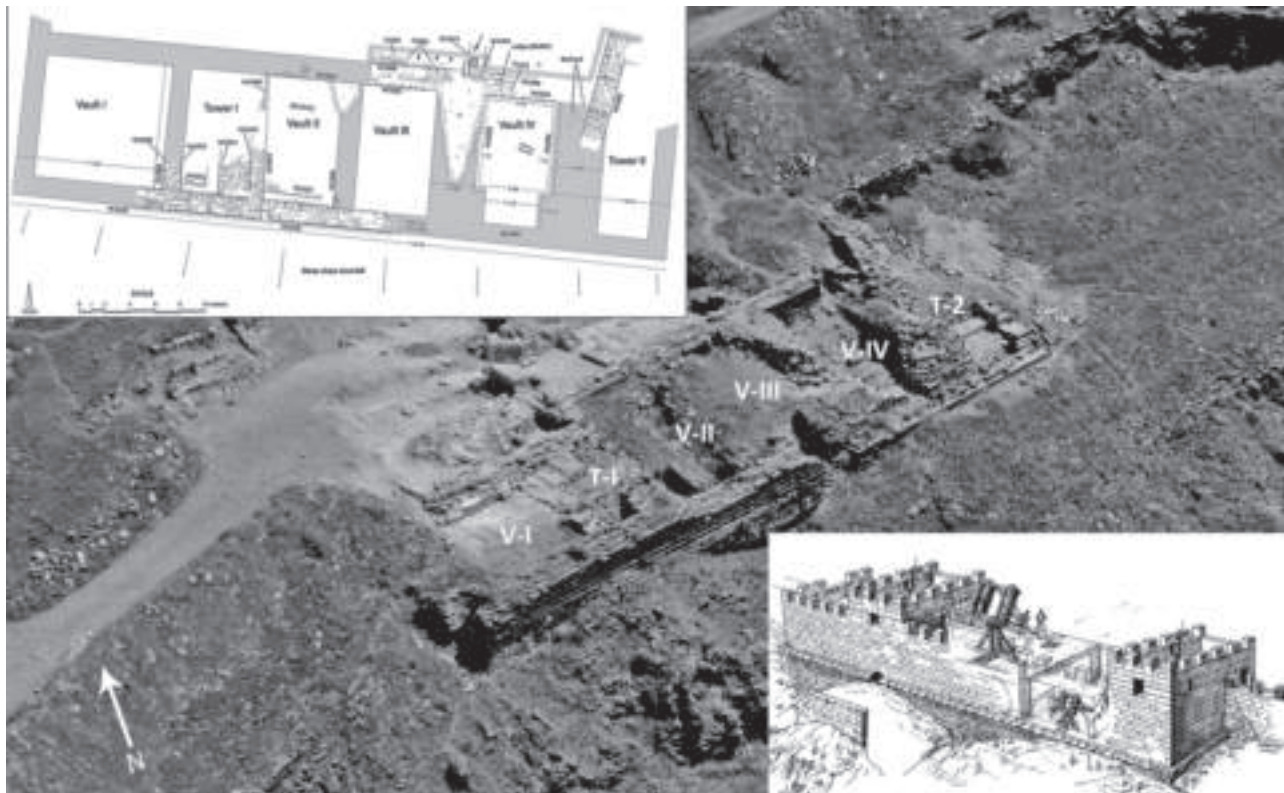


Fig. 10 The bastion. An aerial view, a plan and a suggested reconstruction (photo. M. Eisenberg, plan drawn by B. Cannon and reconstruction by D. Porotski, V. Pirsky and M. Eisenberg).

as the storage of weapons, ammunition and equipment, or even for stationing launching machines. Thus it is not unlikely that a vaulted chamber was used as a position for medium-heavy launching machines that protected the road leading to the east gate. If this supposition is correct, it would be possible to operate a stone launching machine of 40–60 *minae*.¹⁵ The range of these *ballistae* was about 400 m which means that they could be effective over large sections of the road that ascended eastward. Although no remains of ammunition or launching machines were found in Chamber IV, it seems that at this stage this is the only explanation for the existence of an opening of this size. A number of ballista stones weighing 40 *minae* were found in recent years in the excavations at Hippos.

An interesting find was discovered on the northern rear wall of vaulted chamber IV. A number of *caligae* imprints were found in the binding material of the wall. The *caliga* is the standard military boot of the Roman army used from the beginning of the 1st century BCE until the beginning of the 2nd century CE. The most complete imprint contained 44 round indentations created by the *caliga* hobnails, arranged within the scope of the imprint. Three different sizes of the boots were found altogether, indicating those engaged in building the bastion.

In the 3rd century CE, a public bathhouse was built adjoining and also on top of the bastion, which was thereby superseded. The pottery discovered in the foundation channels of the bastion walls and the finding of the *caligae* imprints allow us to determine the time of its erection from the 1st century to the beginning of the 2nd century CE. This was a unique defence position of the Early Roman period, nothing similar to it has so far been revealed.

Outworks

The external system of fortifications in Hippos has not yet been excavated, but they have been surveyed and studied. These components of the external fortifications include wall sections on the northern slopes and especially those on the southern ones, the ditch in the centre of the

saddle ridge, and perhaps also the series of structures that housed the launching machines near the ditch.

Wall segments along the southern and northern slopes

During the course of the survey, wall sections built of ashlar were located under the line of the northern and southern cliffs. These walls were built on rock projections above places where there were 'dead spots' that could have been used by the enemy. The wall sections on the slope were meant to give cover to the defenders while protecting those dead spots. Under the bastion and on the east side of the southern slope, a system of walls was found, built in a cell-like formation along a total length of about 40 m and a width of 12 m (Figs 7, 11). The slope here is so steep that it is difficult to suppose that just in this place Hippos' inhabitants tried to overcome it and build civilian or public buildings and a military nature of structure seems more reasonable.

Could there have been additional launching machines housed in protected hangars in the centre of the saddle ridge on which the main road to the east gate was laid, where a ditch was found quarried into the soft limestone? The maximum width of the ditch was 8 m and it was 4 m deep. This ditch also served as a borderline between the necropolis and the *polis*. Hundreds of tombs carved into the soft rock extended up to the south side of the ditch (Figs 4, 11).

A series of four structures was found near the ditch and on the west side of it, with their wide openings facing west in the general direction of the Sussita rivulet and the ancient road (Fig. 11). These structures have not yet been excavated, but their style of construction with basalt ashlar and their attachment to another wall that ascended from the saddle ridge to the north-west in the direction of the bastion raises the possibility that we have here a system of secure hangars for the launching machines that were meant to protect the main road and trained almost directly towards the ancient road on which the heavy war machines of the enemy could ascend. If this is so, then it is the first example of a

¹⁵ A projectile stone machine (*ballista*) of 40 *minae* could have been operated here, in a calculation based on Philon's formula in accordance with the length of the vaulted chamber of about 8 m. However, in this case, the barrel of the machine could protrude slightly from the wall and thus perhaps the improved and smaller projectile machines of the Early Roman period, the Palintone Vb model, were installed here. Perhaps even a launcher of up to 60 *minae* could have been introduced into the chamber vault. Marsden 1969, 33–6, 46–7.

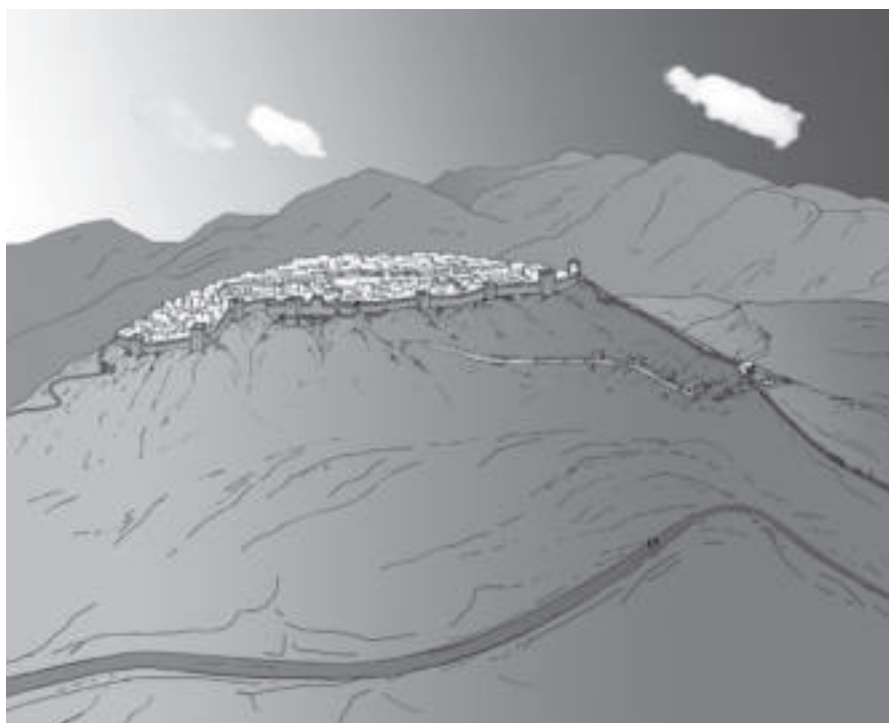


Fig. 11 Hippos, a suggested artistic reconstruction of the city during the Roman period and the ancient road leading to the Sussita saddle ridge. Some of the towers are hypothetical (drawn by D. Porotski, V. Pirsky, M. Eisenberg and A. Regev-Gisis).

defence system of this kind precisely in accordance with Philon's recommendations (Philo *Poliorketika* I, 32).

Conclusions

It seems that the system of fortifications in Hippos during the Early Roman period resembled the 'serrated' wall system adjacent to the line of cliffs (Fig. 10). A wall of this kind was recommended by Philon for a mountainous area (Philo *Poliorketika* I, 84). The number of towers was small because of the advantage of height and because of the sharp crags along the cliff line. The eastern gate and the bastion are among the remaining vestiges of the main fortifications that date from the Early Roman period. It is surprising that just in a period in which, for the first time, unfortified cities began to appear, and Nysa-Scythopolis the best example for it in this region, a relatively small city such as Hippos was fortified in such an impressive manner. Many question marks still hover over some of these remains, and will certainly be clarified when the time comes to excavate them.

The strong affinity, however circumstantial, between Philon's recommendations in his *Poliorketika* and the military architecture in Hippos raised the possibility that

the military architects who built the fortifications on the mountain were well aware of these recommendations or had even held in sight this military manual for the fortification of cities during the Hellenistic period.

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LES FORTIFICATIONS KOUCHANES EN BACTRIANE

Pierre Leriche & Ségolène de Pontbriand*

Résumé

Après la disparition du royaume gréco-bactrien au milieu du II^e siècle av. J.-C., la Bactriane connaît une période confuse au cours de laquelle les établissements fortifiés de toutes tailles se multiplient. Au bout de deux siècles, l'Empire kouchan reconstitue l'unité de la Bactriane qui devient le Tokharestan. Celui-ci joue, avec l'Inde du Nord, un rôle majeur dans l'élaboration de la civilisation de l'Orient hellénisé, dans le développement et la diffusion du bouddhisme et dans les échanges entre Rome et l'Extrême-Orient.

Encore récemment, on n'avait pas réussi à bien caractériser l'architecture militaire kouchane en dehors de la présence d'un décor très spécifique des façades. Mais depuis une vingtaine d'années, de nombreuses découvertes archéologiques ont apporté des éléments importants au dossier. C'est le cas, en particulier, sur deux sites proches l'un de l'autre, fondés par les Grecs sur la rive droite de l'Amou Daria et qui ont trouvé un épanouissement certain à l'époque kouchane : Kampyr Tepe et l'Ancienne Termez. Le premier, dont la vie s'est interrompue sous le règne de Kanichka (milieu du II^e siècle ap. J.-C.) nous renseigne sur les débuts de l'art militaire kouchan. L'Ancienne Termez, en revanche, a joué un rôle de capitale jusqu'à la fin de l'époque kouchano-sassanide et un ensemble de fortifications, construites *ex novo* puis abandonnées après la conquête des Ephtalites (V^e siècle), ont pu y être fouillées. L'analyse des fortifications non modifiées aux époques ultérieures de ces deux villes permet de dégager les traits essentiels de la fortification kouchane et d'établir des parallèles avec d'autres sites importants de Bactriane-Tokharestan (Ouzbékistan et Afghanistan) : Ai Khanoum, Bactres, Surkh Kotal et Dil'bergine Tepe, ainsi qu'avec d'autres ouvrages militaires de la même période.

1. La Bactriane kouchane

L'Asie Centrale, au cœur de laquelle se trouve la Bactriane-Tokharestan de part et d'autre de l'Oxus-Amou Daria, est le monde de la terre à bâtir – brique crue ou *pahsa* (sorte de pisé argileux) – avec laquelle sont élevées des constructions dont la fragilité est souvent compensée

par la massivité. Les édifices militaires ne peuvent donc y avoir l'élégance, le prestige et surtout la durabilité des enceintes en pierre du monde antique méditerranéen. Malheureusement pour l'historien-archéologue, la faible résistance du matériau aux intempéries et à l'humidité a fréquemment entraîné des réfections et même des reconstructions intégrales que facilitait le faible coût

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du matériau, mais qui entravent l'identification d'états cohérents d'une enceinte. On doit cependant constater que les murailles ont toujours été reconnues comme un élément important des sites et ont souvent fait l'objet de recherches dans le cadre de l'établissement du plan et de la datation des sites.

On peut considérer que l'empire kouchan est né au milieu du I^{er} siècle ap. J.-C. et s'étendait de l'Inde du Nord jusqu'au sud de la Sogdiane – c'est-à-dire jusqu'aux Monts du Hissar qui marquent la limite nord de la grande plaine de l'Amou Daria. C'est la conquête sassanide, au milieu du III^e siècle ap. J.-C., qui met fin à cet empire auquel succède un royaume vassal kouchano-sassanide jusqu'à la conquête ephtalite au début du V^e siècle.

Dans cet article, nous essaierons de faire rapidement le point des différentes recherches sur la fortification kouchane en Bactriane, puis nous consacrerons un développement particulier aux fortifications de l'Ancienne Termez, dont la fouille apporte un éclairage nouveau sur le sujet.

A. HISTORIQUE DE LA RECHERCHE SUR LES FORTIFICATIONS KOUGHANES DE BACTRIANE

Les recherches archéologiques en Bactriane-Tokharestan ont commencé dans les années 1920 (Fig. 1) :

Au sud de l'Oxus, un accord signé en 1922 avec l'Afghanistan, confère pour cinquante ans à la DAFA



Fig. 1 Carte de la Bactriane-Tokharestan kouchane (réalisation S. de Pontbriand).

(Délégation Archéologique Française en Afghanistan) l'exclusivité de la recherche archéologique dans le pays. La DAFA explore alors surtout la région de Caboul et de l'Indou Kouch (Begram, Bamiyan, Hadda), mais aussi, au nord, les murailles de Bactres et le site de Shahr-i Banou. Ce sont ensuite deux grands sites bactriens qui sont fouillés : celui de Surkh Kotal à partir de 1951, puis celui d'Aï Khanoum à partir de 1966.¹

D'autre part, à partir de 1969, une mission soviéto-afghane fouille plusieurs sites de l'oasis de Bactres dont celui de Dil'bergine Tepe (avec une remarquable exploration archéologique des fortifications), et étudie les remparts de l'oasis. Enfin, depuis 2003, le site de Bactres est à nouveau exploré avec un programme spécifique consacré aux fortifications.

Au nord de l'Oxus, en URSS, les premiers sites explorés sont ceux de l'Ancienne Termez en 1926–1928 et 1937–1940 et d'Ayrtam en 1933. Mais c'est le plan Krouchtchev de développement agricole des Républiques d'Asie Centrale (1956) qui donne de l'élan à des initiatives d'exploration archéologique préliminaire. Après le premier congrès kouchan de Douchanbé (1968),² plusieurs missions se consacrent à la prospection et à la fouille des sites des vallées entre les Monts du Hissar et l'Amou Daria, dont plusieurs sites fortifiés antiques.³

B. DIFFÉRENTS TYPES DE FORTIFICATIONS KOUCHANES

La période qui a suivi l'effondrement de la Bactriane grecque s'est traduite par un grand mouvement de développement d'agglomérations fortifiées dont certaines ne sont en fait que des implantations militaires hellénistiques ayant donné naissance à des

agglomérations plus importantes.⁴ On distingue alors différents types de fortifications :

- de petites agglomérations présentant une citadelle et une ville basse fortifiée de forme quadrangulaire (Fig. 7).⁵
- de grandes villes créées autour de puissantes forteresses comme l'Ancienne Termez et sans doute Koundouz et Kala-e-Zal. Bactres voit ses murailles renforcées. Aï Khanoum est abandonnée à l'exception de sa citadelle. De grands monuments dynastiques, comme Surkh Kotal, sont entourés de murailles symboliques :
- à une plus grande échelle, les murs d'oasis ou de frontière.⁶

Malheureusement, les défenses de la plupart de ces sites n'ont été fouillées que pour fournir un plan et du matériel destiné à l'établissement de la chronologie du site et non en tant que fortifications proprement dites : pour la plupart, elles sont connues par des courbes de niveau approximatives de la butte qu'elles forment et par quelques coupes et planches de profils céramiques.

Peu de fortifications, en effet, ont fait l'objet de recherches approfondies permettant de définir le modèle auquel elles correspondaient à leur fondation et d'en suivre l'évolution. C'est pourquoi nous citerons surtout, pour l'époque kouchane, les fortifications de Dil'bergine Tepe et Surkh Kotal en Afghanistan et celles de Kampyr Tepe et de l'Ancienne Termez en Ouzbékistan. Quant aux fortifications de Bactres, en dépit des nombreuses études auxquelles elles ont donné lieu encore récemment, on verra plus bas qu'elles ne peuvent servir à définir un modèle de fortification kouchane.

¹ Auxquels s'ajoute l'exploration de la Bactriane orientale. Sur les travaux de la DAFA : Olivier-Utard 1997.

² *Kushan Studies* 1968.

³ Leriche 1973 ; Frumkin 1970 ; Staviskij 1986.

⁴ Leriche 2007.

⁵ À cette catégorie appartiennent, au Tadjikistan, la petite capitale régionale de Yavan (ou Turkul') et les deux petits sites de la vallée du Vakhsh, Key Kobad Shah, peut-être d'origine gréco-bactrienne, avec des fortifications massives à murs pleins sans meurtrières, et Kuhna Kala, projet inachevé d'un palais de prestige, reproduisant le modèle de la maison bactrienne avec une façade à pilastres. En Ouzbékistan, ce sont de nombreux sites comme ceux de Dal'verzine Tepe, Khaltchayan, Zar Tepe, Djandavlat Tepe, Khayrabad, Khaytabad Tepe, etc. En Afghanistan, citons surtout les petites villes de Shahr i Banou, de Dil'bergine Tepe et de Jiga Tepe dans l'oasis de Bactres.

⁶ Le mur de l'oasis de Bactres, long de 72 km avec douze portes, protégeait toutes les terres irriguées. Ce système défensif est accompagné de forteresses comme celle de Toprak-kala mesurant 230 × 230 m de côté. On trouve également la muraille de Derbent qui barre le passage entre la Bactriane de la Sogdiane, d'origine hellénistique : Rahmanov 1994. Cet ouvrage puissant est également accompagné d'une série d'agglomérations fortifiées comme Payon Kourgane ou de forts militaires comme Kurganzol.

2. Fortifications kouchanes anciennement étudiées

A. LA BACTRIANE MÉRIDIONALE

a) *Bactres*

Le site de la légendaire capitale de la Bactriane est entouré des vestiges d'une enceinte impressionnante qui se dressent sur des restes de fortifications antérieures remontant au moins à l'époque achéménide (Fig. 2). A. Foucher, D. Schlumberger, R. Young et M. Le Berre ont cherché à retrouver la fortification de Bactres hellénistique, mais ils ont dû se contenter d'établir une périodisation relative de la construction sur divers tronçons de la muraille. Car, contrairement à ce qu'on écrit souvent, lorsqu'une ville possédant déjà une fortification importante tombe aux mains de nouveaux maîtres, ceux-ci se contentent généralement d'adapter les murailles existantes à leur usage au lieu de les jeter à bas pour les reconstruire selon leurs conceptions. C'est pourquoi les remparts de Bactres conservent leur tracé d'origine, d'où la difficulté d'en définir l'état kouchan.

Ainsi M. Le Berre a pris pour objet une tour antique massive de faible projection aux murs latéraux à fruit très prononcé, contre laquelle une tour médiévale avait été construite.⁷ La façade de cette tour porte un décor bien conservé avec des rangées d'archères sagittales et des motifs appelés « fausse lucarnes » (Fig. 3), décor qui serait celui des fortifications hellénistiques, puisqu'on le retrouve à l'identique sur une phalère d'argent doré attribuée à cette même époque.⁸

En 2005 et 2008, une équipe de la DAFA fouille un tronçon de la partie nord-est de la muraille de Bactres, afin de compléter les observations de M. Le Berre.⁹ Profitant de la tranchée d'un canal d'irrigation, une coupe stratigraphique de 32 m de long et de 5 m de profondeur a été réalisée et une dizaine de petits sondages ont été ouverts sur les parties hautes de la muraille, tout le long du tracé de ce tronçon. La conclusion s'avère malheureusement assez décevante : « Ce sont désormais au moins quatre phases d'aménagement qu'il faut distinguer pour cette partie des murs des fortifications de Bactres. Pour autant, faute de disposer, dans l'état actuel de nos recherches, d'éléments précis de datation



Fig. 2 Vue générale du rempart oriental de Bactres. Vue vers le nord-ouest (cliché P. Leriche).

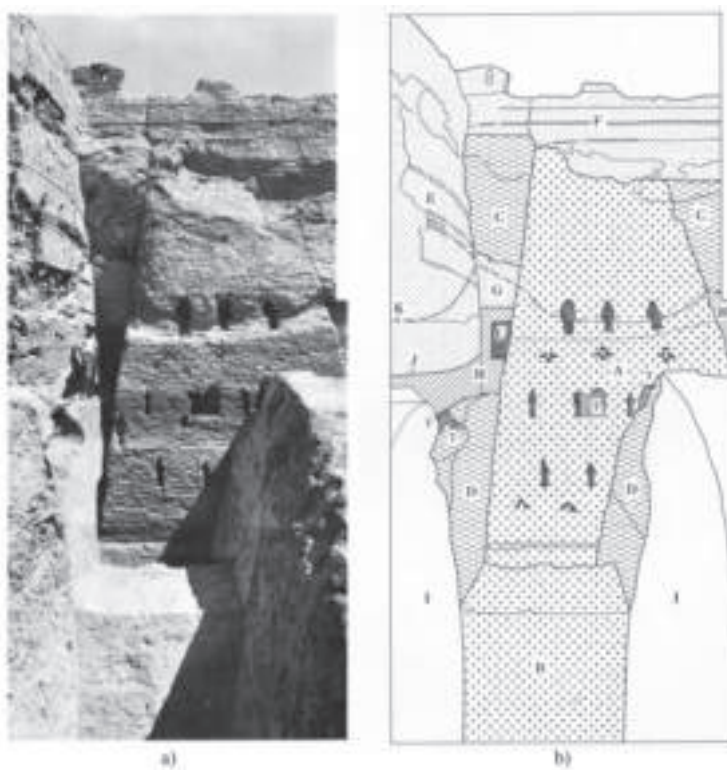


Fig. 3 Façade du saillant ouest de la muraille sud de Bactres : a) photographie ; b) relevé (Le Berre & Schlumberger 1964, pl. XXXVII et XXXVIII).

⁷ Le Berre & Schlumberger 1964, 61-104.

⁸ Sur les fortifications d'Aï Khanoum et de Bactres et sur cette phalère : Leriche 1986.

⁹ Sur cette opération dirigée par P. Mongne, voir Bernard, Besenval & Marquis 2006, en particulier p. 1207-16.

(la céramique est extrêmement rare, et nous n'avons pas recueilli de monnaies), il nous est encore impossible de mettre une chronologie absolue en parallèle à la chronologie relative qui s'esquisse. »¹⁰

En dépit de cette conclusion prudente, il nous semble qu'on peut attribuer à la période kouchane le mur sud (MII) épais de 5 m, construit sur le premier état de la muraille, conservé sur une hauteur de 11 m et nettement visible en coupe et en élévation. MII est édifié en briques carrées (35 × 35 × 8 cm) et présente des fausses archères disposées en quinconce au bas de la muraille. Contre sa face externe rectiligne, sur 60 m, on a pu identifier trois tours pleines, de plan trapézoïdal et en saillie d'environ 5 m.

b) Surkh Kotal

À Surkh Kotal, au centre de la Bactriane, une autre grande fouille de la DAFA a été conduite par D. Schlumberger à partir de 1952 durant seize campagnes. Des fortifications symboliques entourent, au sommet d'une colline, un monumental temple dynastique (*bagolango*) consacré par le principal souverain kouchan Kanichka au milieu du II^e siècle ap. J.-C. (époque des Grands Kouchans).

Les fortifications de l'acropole, longues d'un kilomètre, suivent la ligne de crête. Le rempart, construit en briques crues de 40 × 40 cm, est épais de 3,2 m. La défense se faisait par le haut. Deux tours y ont été dégagées. La tour d'angle c mesure 10,3 × 10,15 m, avec une projection de 5,4 m. Elle comporte une chambre de 4 × 3,75 m avec une porte large de 1,10 m. La tour d est identique, mais rectangulaire : 10 × 4,8 m avec une chambre de 3,75 × 2,45 m et une porte large de 1,15 m. Les meurtrières sagittales distantes de 1,60 à 2,30 m s'ouvrent près du sol. Les deux courtines dégagées mesurent 53,5 m (c-d) et 84,2 m (d-e).¹¹

Au sommet de la colline, le sanctuaire lui-même avait l'apparence d'une fortification (Fig. 4) : « De l'extérieur, l'enceinte du péribole offrait l'aspect d'un ouvrage militaire. Elle se présentait comme un rempart de ville dont l'apparence guerrière n'était tempérée que par le riche décor de ses murs. De loin, le sanctuaire devait ressembler à une forteresse. »¹²

On peut donc, à travers la conception de cette muraille symbolique, repérer ici les éléments qui, à l'époque des

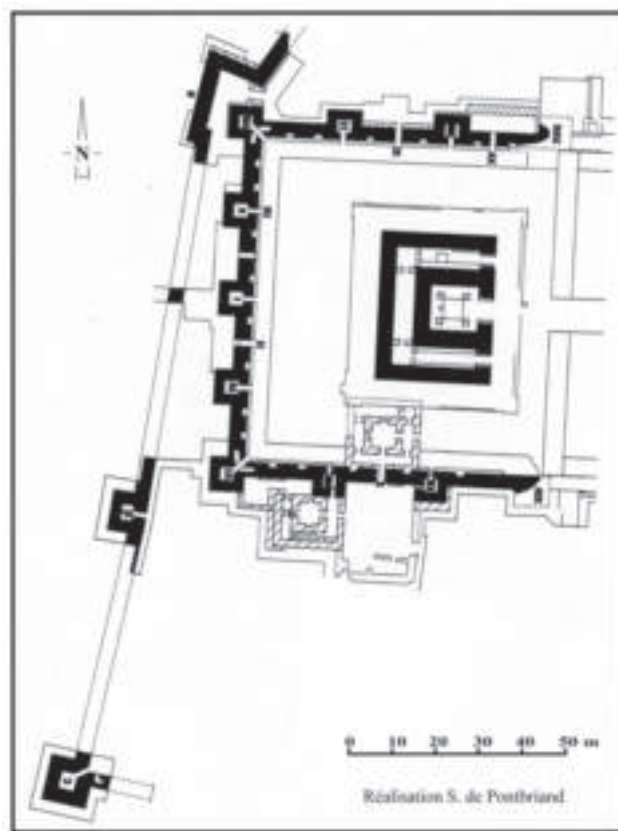


Fig. 4 Surkh Kotal. Plan général des fortifications et de l'enceinte du sanctuaire (S. de Pontbriand, d'après Schlumberger, Le Berre & Fussman 1983, pl. IV).

Grands Kouchans, paraissent importants au moment de la construction d'une enceinte :

- Le plan est d'une parfaite régularité : trois tours à l'arrière et trois sur chaque côté, deux tours d'angle.
- Les tours, distantes de 13 m, sont creuses, carrées (7,8 m de côté), établies à cheval sur les courtines et en forte saillie (3,9 m sur les courtines, 5,25 m aux angles).
- Le décor, purement architectural, est produit par l'agencement des briques en retrait du nu de la paroi, à des profondeurs différentes. Sur la hauteur préservée, on compte quatre motifs : « une zone ornée d'une alternance régulière de fausses meurtrières en pointe de flèches et de fausses fenêtres rectangulaires aveugles ; une zone de briques en damier ; une rangée de briques en dévers ; un rang de fausses lucarnes triangulaires. »¹³

¹⁰ Bernard, Besenval & Marquis 2006, 1216.

¹¹ Schlumberger, Le Berre & Fussman 1983, 17-20, pl. III et IV, VI et VII.

¹² *Ibid.* 31.

¹³ *Ibid.* 31-2.

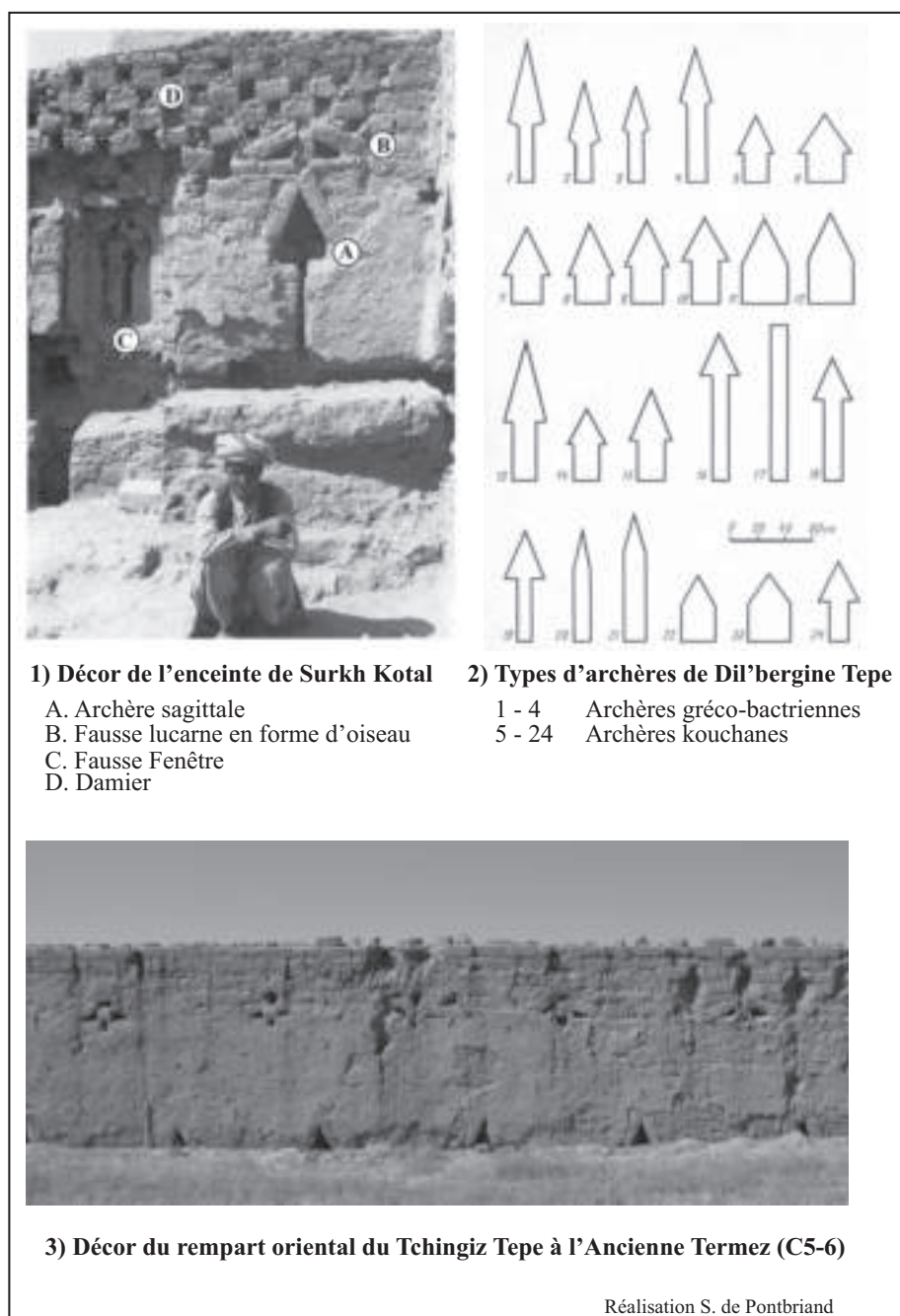


Fig. 5 Décor des fortifications kouchanes de Bactriane :

1) Décor de l'enceinte de Surkh Kotal. A : fausse archère sagittale ; B : fausse lucarne en forme d'oiseau ; C : fausse fenêtre ; D : damier (D'après Schlumberger, Le Berre & Fussman 1983, pl. 19 fig. 47).

2) Types d'archères de Dil'bergine Tepe. 1-4 : archères gréco-bactriennes ; 5-24 : archères kouchanes (D'après Dolgoroukov 1984, fig. 4.62).

3) Pour comparaison: Décor du rempart oriental du Tchingiz Tepe à l'Ancienne Termez en 2005 (cliché MAFOuz de Bactriane).

Dans ce décor, on reconnaît deux motifs des remparts de Bactres que D. Schlumberger décrit ainsi (Fig. 5.1) :

- « Les fausses meurtrières sont constituées de deux montants, dont l'écartement va en se rétrécissant pour figurer la hampe d'une flèche, et d'un couronnement fait de deux briques qui dessine la pointe de la flèche. Sur les courtines, les fausses meurtrières ne traversent jamais le mur. Mais sur les tours, certaines de ces

fausses meurtrières sont percées dans l'épaisseur de la muraille et leur fonction n'est pas seulement décorative : elles servaient aussi à l'aération et à l'éclairage comme dans les tours *c* et *d* du rempart de la ville.

Au-dessus de chacune des meurtrières [...] est une fausse-lucarne triangulaire. [...] Les fausses-lucarnes sont faites de briques en dévers placées en < accent

circonflexe » et prenant appui au centre sur une demi-brique placée de chant. »¹⁴

L'apparence extérieure est donc, à l'époque dite « des Grands Kouchans », une dimension importante d'une fortification, au moins pour celles d'une cité capitale (Bactres) ou d'un grand monument dynastique (Surkh Kotal). Nous verrons que cet aspect n'est pas absent des autres monuments militaires de cette période.

c) Dil'bergine Tepe

Dil'bergine Tepe, située aux marges nord-occidentales de l'oasis de Bactres, se compose d'une cité fortifiée entourée de faubourgs ouverts et dominée au centre par une citadelle d'origine achéménide (Fig. 7). Les fortifications de Dil'bergine Tepe ont été soigneusement étudiées par une équipe soviétique entre 1969 et 1978 et rapidement publiées.¹⁵ Bien que les travaux aient été interrompus par la guerre, cette fouille est la première à nous donner un tableau à peu près complet des caractéristiques et de l'évolution d'une fortification kouchane. Les murailles de la ville hellénistique ont, en effet, été détruites ou réutilisées par l'enceinte kouchane et celle-ci a été abandonnée après la fin de l'empire kouchan. On a donc ici des fortifications d'un grand intérêt pour notre propos, même si celles-ci ont subi au moins six grandes périodes architecturales qu'il est parfois difficile de distinguer de manière claire.¹⁶

Le premier état de la fortification urbaine date du début de l'époque kouchane (fin I^{er} – début II^e siècle ap. J.-C. ; monnaies de Sôter Megas). Il s'agit d'une enceinte carrée de 390 m de côté, entièrement construite en briques crues de 38 × 39 × 14 cm. Les courtines sont longues de 17 à 20 m. À certains endroits, elles sont massives, épaisses de 5,2 m, donc avec une défense qui se faisait par le haut. À d'autres endroits, comme dans la muraille sud, les courtines, épaisses de 3,8 m, sont parcourues par une galerie d'un mètre de large, avec des escaliers menant à divers niveaux de la défense. Des meurtrières sagittales droites sont disposées tous les deux mètres (Fig. 5.2).

Sur chaque côté de l'enceinte, douze tours quadrangulaires de 9 × 5 m sont pourvues de locaux intérieurs de 3,5 × 2,6 m, communiquant avec la galerie à l'arrière par un passage étroit. Elles sont éclairées par des meurtrières

sagittales droites ou rayonnantes. Les angles sont renforcés par des tours disposées à cheval sur les deux côtés avec une projection de 6 m et un front de 8,5 m.

Deux portes ont été identifiées au nord-est et au sud, mais il est probable qu'il y en avait une sur chaque côté. Selon la tradition grecque, ces portes sont encadrées de deux tours identiques aux autres. Le passage entre ces tours est de 2,40 m (Fig. 6). À l'époque des Grands Kouchans, la porte nord-est et la porte sud ont été bouchées et une nouvelle porte a été créée au sud. La première porte sud est transformée en un puissant massif, une sorte de donjon extérieur protégeant le flanc sud de la muraille urbaine, avec une galerie de tir à l'extérieur et un renforcement interne du rempart sud.

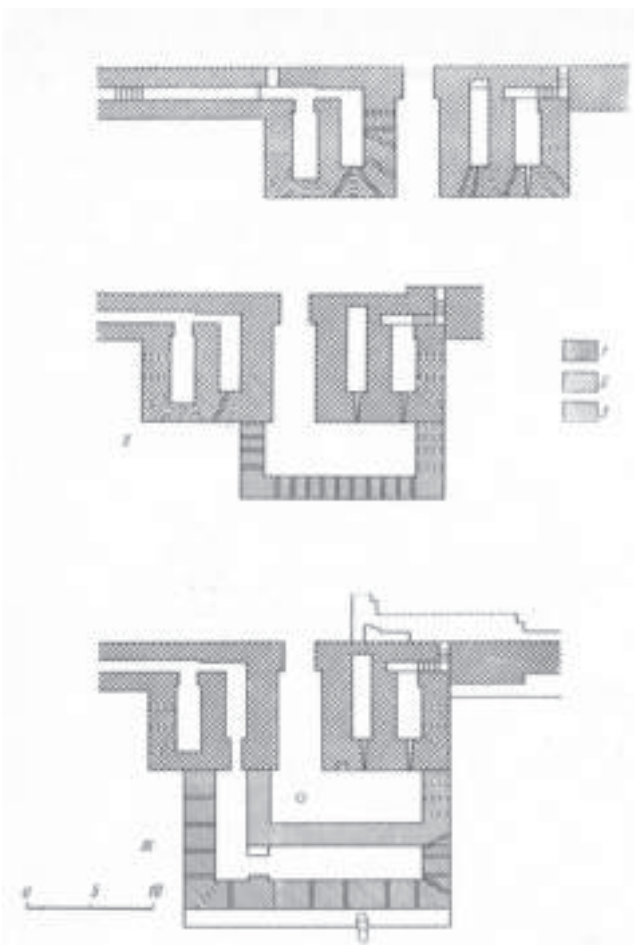


Fig. 6 Évolution de la porte sud de Dil'bergine Tepe (d'après Pougatchenkova 1984, fig. 4.96).

¹⁴ *Ibid.*, 31-2 pl. × et XVI.

¹⁵ En particulier dans la série *Drevnyaya Baktriya* (3 vol parus de 1976 à 1984) créée à cet effet.

¹⁶ De plus, ces fortifications nous sont décrites par deux auteurs entre lesquels apparaissent parfois quelques contradictions : Dolgoroukov 1984 ; Pougatchenkova 1984.

Sur la citadelle, la muraille circulaire (520 m de circonférence) est pourvue d'une galerie avec des contreforts. Celle-ci comporte 178 groupes de cinq meurtrières – deux meurtrières droites en bas pour le tir rapproché et trois en haut pour un tir plus long et rayonnant – séparés par un intervalle de 3 m. On peut donc évaluer à deux cent cinquante environ le nombre de défenseurs.

Une inscription permet de dater ce nouvel état de l'époque de Kanichka.

À la fin de l'époque kouchane (fin II^e–début III^e siècle), le massif sud est à nouveau épaissi mais certaines parties de l'enceinte urbaine et de la citadelle perdent leur fonction militaire.

Puis, fait nouveau, la citadelle est pourvue de tours en fer à cheval en *pahsa* très irrégulières (mesurant de 4,25 à 3,8 m de large et de 4,5 à 2,5 m de projection) et pourvues ou non de meurtrières. Au rempart sud de la ville, les tours quadrangulaires sont réparées et renforcées à l'aide de *pahsa*.

La fortification porte ensuite des traces d'assaut avec sapes, sans doute dues à la conquête sassanide. La vie se concentre ensuite dans la citadelle, puis la ville est définitivement abandonnée.¹⁷

d) Oasis de Bactres

Enfin, signalons qu'un fragment important du rempart de l'oasis de Bactres est conservé près du village de Zadyan. Il s'agit d'un mur de *pahsa* de 2 m d'épaisseur sur un soubassement épais de 4,5 m, comportant des niches de tir à trois archères en éventail et renforcé par des tours quadrangulaires à faible saillie (1,3 m), de dimensions réduites. Le rôle probable de cette muraille est la protection à la fois contre l'ennemi et contre les sables du « désert ». Malheureusement, on ne possède aucun indice de datation précise pour cet ouvrage considérable.¹⁸

B. LA BACTRIANE DU NORD

De nombreuses fortifications de villes petites ou moyennes ont fait l'objet de recherches plus ou moins

sommaires en Bactriane soviétique, comme celles de Khaltchayan et Khaytabad Tepe dans la vallée du Surkhan Daria, Khayrabad Tepe et Djandavlat Tepe dans l'oasis de Chirabad ou encore Kafir Kala non loin de Douchanbé. Nous ne retiendrons ici que deux exemples particulièrement représentatifs de ces recherches relativement sommaires qui tranchent avec celles que nous venons de voir à Dil'bergine ou avec d'autres que nous verrons sur des sites plus récemment fouillés.

a) Dal'verzine Tepe

La ville de Dal'verzine Tepe, située dans la moyenne vallée du Surkhan Daria, est d'origine hellénistique, mais son *acmè* date de l'époque kouchane (Fig. 7). Elle a été fouillée à partir de 1962. Une première synthèse a été publiée en 1978.¹⁹

La ville, ceinte d'une muraille bordée d'un fossé, a la forme d'un rectangle de 720 × 570 m avec une superficie totale, citadelle comprise, de 31 ha. Elle est installée sur un promontoire, naturel avec, à son angle sud-est, une saillie un peu plus élevée sur laquelle a été construite une citadelle circulaire fortifiée (3 ha) qu'un grand fossé artificiel large de 20–25 m isole de la ville basse.

Ces fortifications ont été étudiées au moyen de tranchées, une sur le côté ouest de la citadelle, deux sur la muraille nord et deux autres sur le rempart ouest.

Sur la citadelle, le mur le plus ancien d'époque gréco-bactrienne est épais de 1,90 m. Au I^{er} siècle av. J.-C., on construit en léger retrait un mur beaucoup plus puissant dressé sur un socle en débord épais de 5 m en couches alternées de *pahsa* et de briques.

À l'époque des Grands Kouchans, cette enceinte est renforcée à l'extérieur par un deuxième mur épais de 4,7 m, fait de briques de 35 × 35 × 11–12 cm, ce qui confère au rempart une épaisseur de 10 m.

Sur le rempart de la ville basse, le relief permet de déceler l'existence de saillants (6 × 2 m) distants de 30 à 40 m au sud et à l'est de tours d'angle (la seule qui ait été fouillée à l'angle sud-ouest n'est saillante que de 75 cm).

¹⁷ Selon les auteurs de *Drevnyaya Baktriya* 1 et 3, d'autres grands sites urbains avec des fortifications de même type ont été repérés aux « frontières du royaume », à Komsar, près de Harcikak ou à Toprak Kala avec meurtrières, lucarnes et mâchicoulis (?) près de Mouminabad.

¹⁸ Pougatchenkova 1976, fig. 77–79.

¹⁹ Pugachenkova 1978. Les fouilles se poursuivent encore actuellement, mais les fortifications ne font plus depuis longtemps l'objet d'une étude particulière.

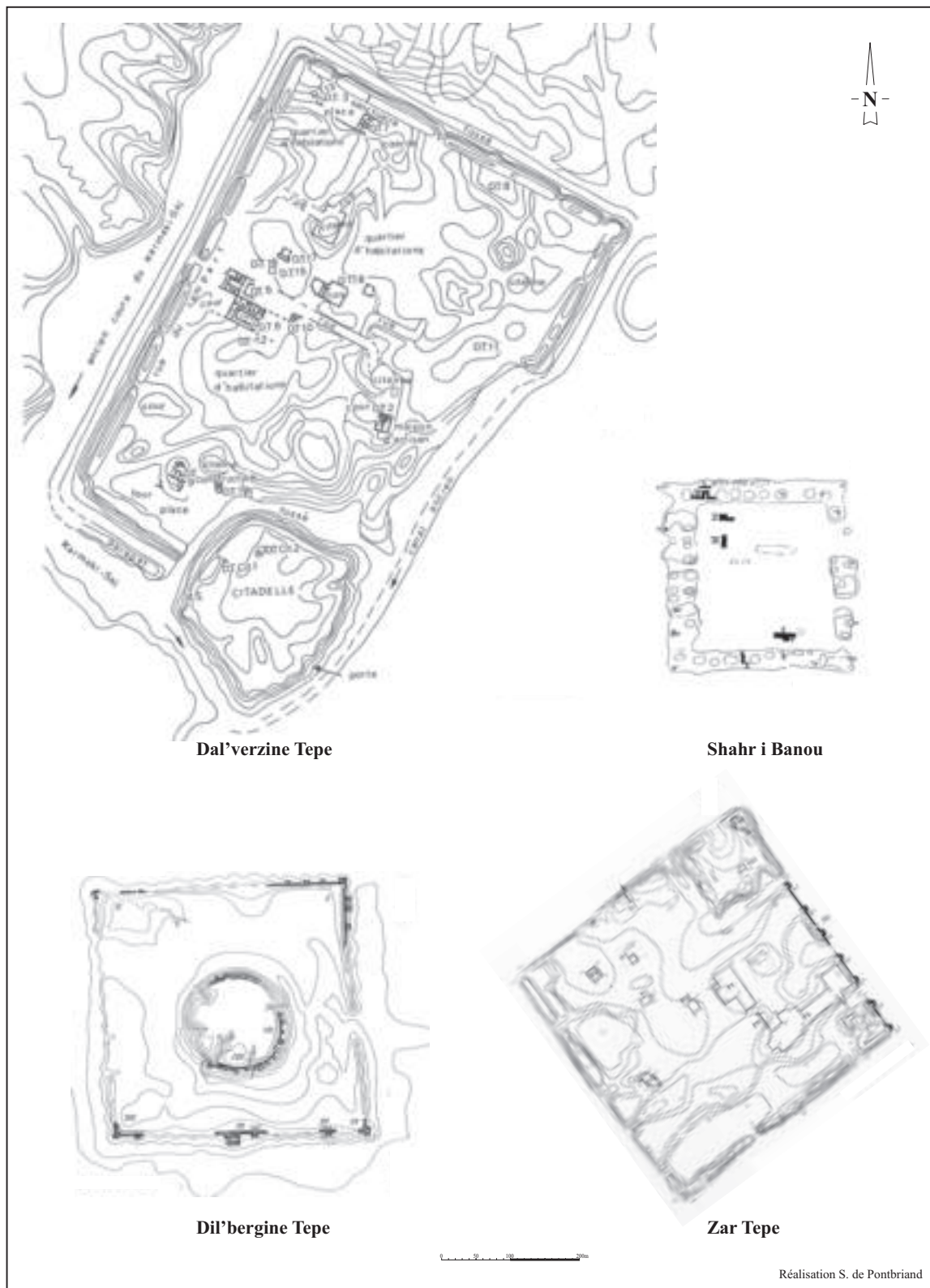


Fig. 7 Plans de villes fortifiées kouchanes. L'échelle est commune aux quatre sites (réalisation S. de Pontbriand; Dal'verzine Tepe, d'après Staviskij 1986, fig. 34.266 ; Shahr i Banou, d'après Hackin, Carl & Meunié 1959, fig. I.1.60 ; Dil'bergine, d'après Dolgoroukov 1984, fig. 1.59 ; Zar Tepe, d'après Zavyalov 2008, fig. 2.18).

On distingue deux phases :

- La première daterait du tout début de la dynastie kouchane : il s'agit d'une muraille massive en briques et *pahsa*, à tours rectangulaires sans chambres intérieures, construite sur un socle de *pahsa* débordant à l'extérieur. Elle était peut-être destinée à empêcher l'approche des machines de siège, selon un principe que l'on retrouve à Aï Khanoum.
- Dans une deuxième phase (II^e siècle ap. J.-C.), on épaissit la muraille (angle nord-ouest) ou on la transforme en rempart à casemates, à l'angle nord-est, au milieu et à l'extrémité sud du mur ouest. Ce type de fortification à casemates est bien connu à la même période sur d'autres sites d'Asie Centrale.

À la fin de la période kouchane, après diverses réfections, les fortifications de la citadelle et de la ville cessent d'être tenues militairement et servent de logement ou de nécropole.

On ne connaît donc que la chronologie des fortifications qui sont conçues pour une défense passive au sol avec des murs épais et une artillerie à l'étage. Rien n'est dit des façades ou des défenses avancées, si ce n'est qu'il y avait un fossé dont la date et l'importance n'ont visiblement pas fait l'objet d'une recherche.

b) Zar Tepe

Zar Tepe (Fig. 7), autre création de l'époque kouchane, a la forme d'un carré fortifié de 400 m de côté (16 ha), renforcé par une citadelle carrée de 120 × 120 m, construite dans l'angle nord-est, sur une haute plateforme artificielle et isolée de la ville par un fossé.²⁰

La fouille de ces murailles date de 1972. On dénombre au moins quatre grands états de l'enceinte dont le plus ancien remonte au début de l'époque kouchane (I^{er} siècle ap. J.-C.). En subsistent les restes d'un angle de tour quadrangulaire percé de meurtrières étroites.

Le dernier état (VI^e siècle) illustre le passage de la tour rectangulaire à la tour semi-circulaire. Sept tours, séparées par des courtines massives de 30 m de long ont été dégagées. Les tours mesurent 11 m de large et 6,4 m de projection avec un local intérieur de 4 × 4 m

et quatre meurtrières rayonnantes. Ces tours ont été édifiées contre une muraille massive de *pahsa* de 3,5 m d'épaisseur percée de meurtrières rayonnantes disposées tous les 10 m environ. Cette forme nouvelle de rempart est la trace incontestable de l'influence prééminente des Sassanides.

c) Kampyr Tepe

Située à une trentaine de kilomètres en aval de Termez, sur une falaise dominant la vallée de l'Amou Daria, cette petite ville (750 m d'est en ouest et 200 à 250 m du nord au sud) est fouillée depuis 1972 et surtout depuis 1979 (Fig. 8). Elle est née d'un *phrourion* hellénistique établi sur un point de traversée du fleuve. Son système défensif à plan irrégulier, installé au-delà du grand fossé qui circonscrit la forteresse hellénistique,²¹ semble avoir été réalisé après le développement de la ville.

La muraille urbaine présente des courtines longues de 13 à 18 m (sauf la première qui atteint 30 m) et épaisses de 2,7 à 3,5 m. Ces courtines ne comportent pas de galerie intérieure. Elles sont percées d'archères distantes de 90 cm et placées à 50 cm du sol.

Les tours quadrangulaires, accolées au rempart, sont fondées sur une plateforme de *pahsa*. Elles sont creuses et comportent également des archères. En moyenne, elles ont une largeur de 6 m et une projection de 3,5 m avec des

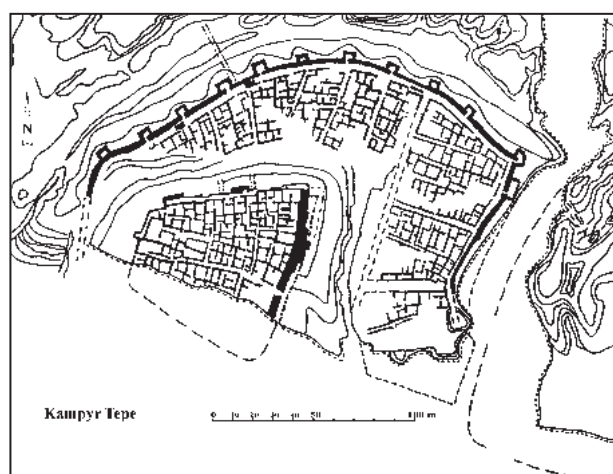


Fig. 8 Plan de la ville fortifiée de Kampyr Tepe (d'après E.V. Rtveladze, in *Materialy Tokharistanskoy Ekspeditsii* 3, Tachkent 2002, fig. 1.6–7).

²⁰ Sabirov 1974 ; Zavyalov 2008.

²¹ La citadelle hellénistique a été détruite par l'effondrement de la falaise et la partie restante de sa muraille a été recouverte par des constructions domestiques. Cette muraille primitive n'est connue que par un tronçon subsistant en sous-cœurve des maisons qui ont occupé la citadelle : Sverchkov 2001 ; Rusanov 2000.



Fig. 9 Fortifications partiellement restaurées de Kampyr Tepe, vue vers le sud-est (cliché MAFOuz de Bactriane).

murs épais de 2 m en façade et de 1,6–1,8 m sur les côtés. Cela donne des locaux intérieurs de 2,5 × 1,5 m, accessibles directement depuis la rue qui longe le rempart. La tour à cheval sur l'angle nord-est comporte des angles arrondis (Fig. 9). Une coupe à l'avant de la tour 4 nous montre un fossé large de 4,5 m et profond de plus de 1,5 m.

La date de cette enceinte nous est donnée par le format des briques (31–35 × 31–35 × 11–13 cm), typique de l'époque des Grands Kouchans, et par le monnayage qui s'interrompt à l'époque de Kanichka. E. Rtveladze, le fouilleur du site, considère que la vie à Kampyr Tepe s'est interrompue à la fin du règne de Kanichka, peut-

être à la suite d'un séisme qui aurait provoqué la chute partielle de la citadelle dans le fleuve.

On a ici une fortification très simple et légère destinée à la défense de la ville contre le brigandage, mais peu efficace contre une armée. Elle a été apparemment construite comme un tout et nous fournit un exemple très clair de l'état des conceptions défensives du début de l'époque kouchane. Celles-ci se placent dans le prolongement de la poliorcétique de la fin de l'époque hellénistique en Bactriane, avec un plan relativement simple et des façades sans décor particulier, en dehors des archères sagittales.

3. Les fortifications kouchanes de l'Ancienne Termez

Les recherches sur les fortifications de l'Ancienne Termez, la plus puissante place-forte de Bactriane du Nord depuis la fin de l'époque hellénistique jusqu'à la conquête mongole, ont été entreprises par la Mafouz de Bactriane de 1993 à 2013. Outre les défenses médiévales, encore visibles, de la ville et de la citadelle, de puissantes fortifications kouchanes y sont apparues dans la partie occidentale du site, le long de l'Amou Daria. Le tracé de ces fortifications a permis de délimiter la cité kouchane, en particulier sur les flancs nord et est de la colline du Tchinguiz Tepe (Fig. 10).

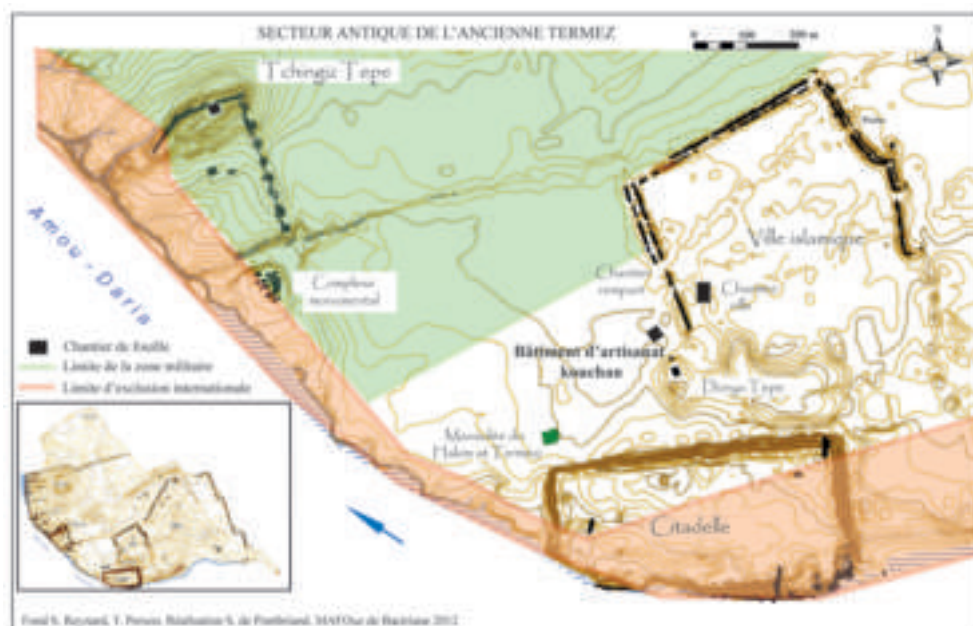


Fig. 10 Ancienne Termez, plan du secteur antique du site. En encart, plan topographique général (cliché MAFOuz de Bactriane).

A. LES FORTIFICATIONS DE LA CITADELLE

Longue de 600 m est-ouest et large de 300 m nord-sud environ, cette importante citadelle avait fait l'objet de recherches antérieures largement inédites révélant une grande épaisseur de couches accumulées (14 m).

Quatre chantiers y ont été ouverts, dont deux nous ont révélé l'existence d'un système défensif d'époque kouchane tout à fait remarquable. Le premier (chantier B) a pris la forme d'une tranchée stratigraphique nord-sud longue de 50 m, à travers les lignes de fortifications successives. Le second a été implanté à l'angle sud-est de la citadelle – à l'endroit où une route très large avait été taillée au bulldozer pour relier le sommet de la citadelle à un embarcadere sur la rive du fleuve – dans l'espoir de retrouver les fondations des différentes murailles détruites et d'en établir le plan.

Dans la tranchée B, sous les vestiges de plusieurs fortifications d'époque islamique, le soubassement d'une enceinte kouchane a été mis en évidence sous la forme d'une maçonnerie de plus de 8 m d'épaisseur masquant les restes d'une fortification gréco-bactrienne. L'arrêt des fouilles imposé par l'autorité militaire n'a pas permis de mettre au jour la face arrière de la maçonnerie kouchane, mais la seule épaisseur du massif suffit à confirmer l'existence sur la citadelle d'une puissante ligne défensive édifée au sommet de la pente qui surplombe le fleuve, accolée au tracé de la fortification grecque.

À l'angle sud-est de la citadelle, la recherche en plan a révélé quatre fortifications juxtaposées, dont la plus ancienne est incontestablement d'époque kouchane : ici la maçonnerie de briques crues, d'un format de 32 cm de côté, vient directement habiller les parois de l'élévation naturelle du terrain sur laquelle est installée la citadelle. Le tracé oriental de la citadelle remonte donc à l'époque kouchane et l'enceinte grecque se trouvait plus à l'ouest. En outre, des travaux récents de mise en valeur et de restauration de l'angle nord-ouest de la citadelle ont montré la même séquence d'états qu'à la tranchée B, à la base desquels se trouve un état incontestablement kouchan (Fig. 11).

On peut donc en conclure que ce sont les fortifications kouchanes qui ont créé le plan définitif de la citadelle de l'Ancienne Termez, plan qui débordait très largement les dimensions du *phourion* grec et qui est reproduit fidèlement au cours des périodes ultérieures.

Cet acquis très important pour l'histoire de l'Ancienne Termez est cependant limité par le fait que sur aucun de



Fig. 11 Ancienne Termez, angle sud-est de la citadelle : coupe des fortifications juxtaposées de l'époque antique à l'arrivée des Mongols. La muraille la plus ancienne (dans la coupe à droite) est d'époque kouchane. Vue vers l'ouest (cliché MAFOuz de Bactriane).

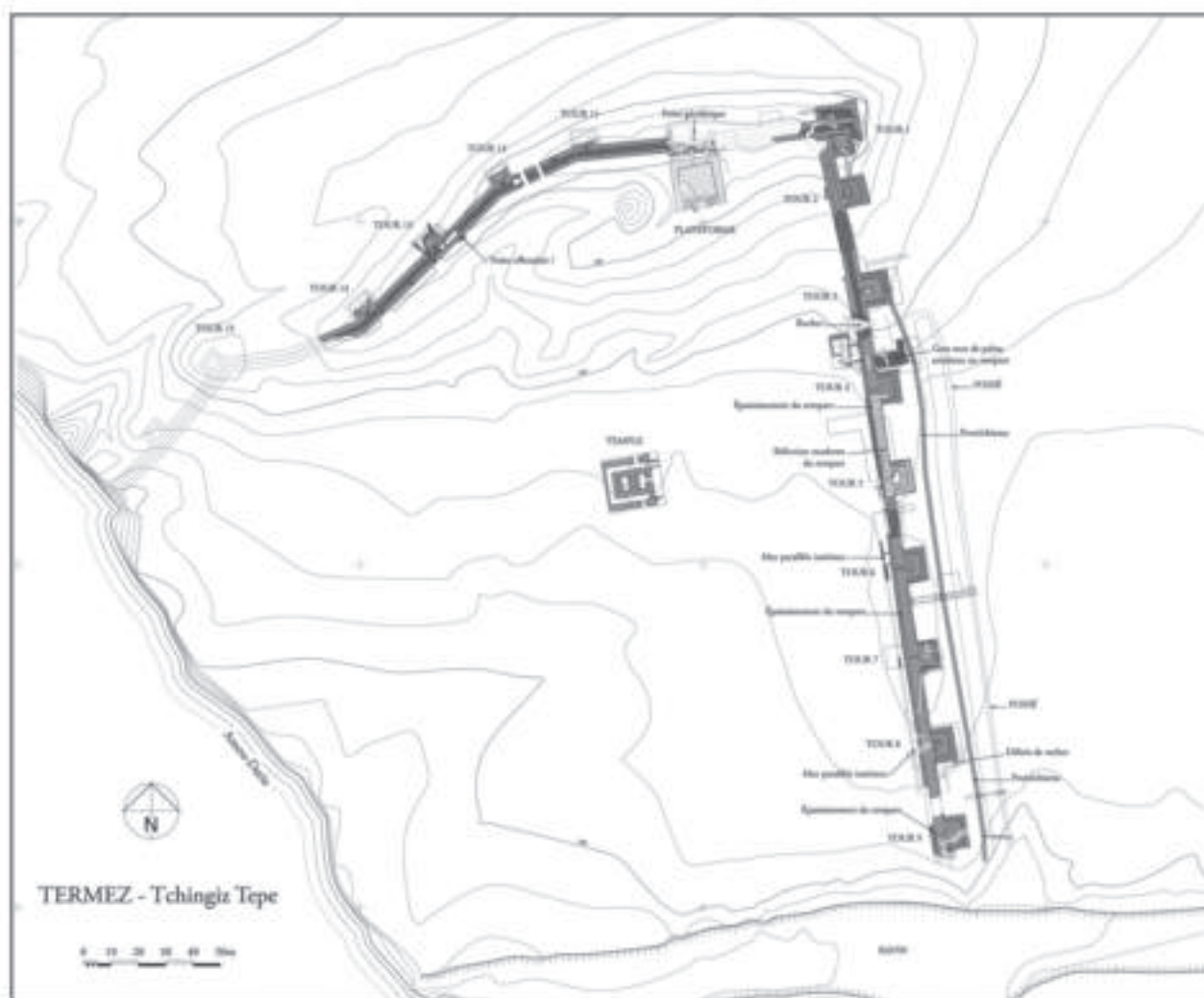
ces chantiers nous n'avons pu étudier cette fortification kouchane en élévation. Un manque que la fouille des fortifications du Tchingiz Tepe nous a largement permis de compenser.

B. LES FORTIFICATIONS DE TCHINGIZ TEPE

La présence de l'impressionnant système fortifié de la colline de Tchingiz Tepe a été révélée en 1997 et de 1999 à 2007. La mission s'est attachée à fixer le plan et les caractéristiques de cette enceinte sans compromettre sa conservation : à l'ouest, celle-ci n'a été dégagée que sur une hauteur très limitée mais suffisante (de 0,5 à 1,5 m, rarement plus) et, à l'est, du côté abrité du vent et de la pluie, sa façade a pu être dégagée en quelques points limités. Quatorze tours ont alors été découvertes et le tracé de toute la fortification accessible a été établi (Fig. 12).

Par la suite, des secteurs de fouille ont été ouverts à des endroits clefs pour étudier l'organisation et la structure de cette enceinte (corridors, ouvertures, stratigraphie) et rechercher la présence d'éléments de défense avancée ou d'habitat à l'arrière.

À l'origine, cette fortification englobait l'ensemble de la colline en mettant à profit les particularités du relief. Au nord, elle suivait la ligne de crête que forme le sommet du Tchingiz Tepe. À l'ouest, elle devait longer la falaise de la berge du fleuve, mais il n'en subsiste plus de trace. À l'est, où aucune particularité du terrain ne s'impose, la fortification adopte un tracé pratiquement rectiligne nord-sud. Au sud enfin, le long du ravin qui sépare la



colline de Tchingiz Tepe du petit plateau de Tchingiz 2 (sur lequel s'élèvent un palais et un temple), aucune trace d'une quelconque ligne de défense n'est apparue et l'on est réduit à des conjectures sur son tracé.

a) La fortification septentrionale de Tchingiz Tepe

Ce rempart suit d'est en ouest le tracé du sommet de la colline en formant une ligne brisée à partir de la tour 1. À l'origine, il devait mesurer 350 m, de la tour d'angle T1 jusqu'à la rive du fleuve, mais cette dernière partie est restée hors de notre portée. Cette fortification a donc été dégagée en surface sur les seuls 260 m accessibles (Fig. 13).

Or, la surface sommitale de la colline de Tchingiz sur laquelle a été implantée cette fortification est faite de sable et de gravillons peu maçonnés, donc aisément mobilisables.²² En dépit des précautions prises par les constructeurs pour affermir les fondations, le sable est redevenu fluide et les murs de façade de toutes les tours ont disparu.

De plus, cette muraille a souffert de la permanence de la fonction militaire en zone frontrière. Si bien que, par endroits, les courtines sont conservées jusqu'au départ des voûtes qui les couvraient, tandis qu'ailleurs elles sont pratiquement arasées. Quant aux tours, seules deux

²² La colline de Tchingiz sur laquelle a été implantée cette fortification est, en effet, une butte témoin d'un niveau de terrain sur lequel coulait l'Amou Daria à l'ère quaternaire.



Fig. 13 Ancienne Termez, fortifications nord du Tchingiz Tepe (cliché MAFOuz de Bactriane): A. Tour 13, dont la façade a été détruite par une explosion moderne. Vue vers le sud; B. Vue générale du rempart nord depuis l'ouest. Au premier plan, la courtière 14-13 utilisée comme nécropole après l'abandon du rempart.

d'entre elles sont conservées sur plus de la moitié de leur surface et ont pu être correctement étudiées.

Les tours

Les tours 12 à 15²³ sont exactement identiques, larges de 7,5 m, avec une projection de 5,4 m et régulièrement espacées de 26 m. La mieux conservée est la tour 13, qui a livré d'importantes informations sur les méthodes de

construction comme sur les phases d'occupation avant son abandon. Seuls les murs est et sud sont conservés sur une hauteur significative (3 m). Cette tour est établie sur une plateforme débordante de *pahsa* recouverte par trois assises de briques crues de 35 × 35 × 12 cm. Les murs latéraux, d'une épaisseur de 1,70 m, sont édifiés avec des briques semblables. Le comblement de l'intérieur des tours indique que celles-ci ont connu deux phases de réfection avant l'abandon final (Fig. 13.A).

Les courtines

Les courtines, d'une épaisseur totale de 4,95 m et d'une longueur de 26 m, ont partout la même structure. Elles sont construites sur une plateforme commune de *pahsa*. La largeur du corridor est de 1,8 m. L'épaisseur du mur de façade est de 1,85 m, celle du mur arrière est de 1,5 m. Il n'y a pas de différence de niveau notable entre le sol des corridors et celui des tours (Fig. 13.B).

La hauteur moyenne des voûtes des corridors jusqu'au sommet de l'intrados est de 2,6 m. Pour la construction de ces voûtes, des briques rectangulaires spécifiques ont été maçonnées de chant avec une inclinaison longitudinale d'environ 20 degrés.

Les archères, distantes entre elles de 1,4 à 1,7 m, traversent toute l'épaisseur du mur. Alors qu'en façade, elles sont toujours de forme sagittale, celles du mur sud sont rectangulaires et de proportions différentes : 1 m de haut et 10 cm de large à la base contre 70 cm de haut sur 14 à 25 cm de large.

Le matériel céramique qui correspond à la dernière période d'utilisation de l'enceinte est daté de la seconde moitié du III^e siècle jusqu'au IV^e siècle ap. J.-C.

b) La fortification orientale

À son extrémité orientale, la fortification nord fait un retour à angle droit vers le sud sur la forte pente du versant méridional de la crête de la colline : entre les tours 1 et 3, le dénivelé est d'un peu plus de 12 m pour une distance de 60 m, soit de 20%. Le rempart, épais de 6 m, comporte un corridor intérieur large de 1,9 m, entre un mur de front épais de 1,8 m et un mur arrière épais de 2,1 m. Les tours et le corridor communiquaient au même niveau par un passage large de 0,9 m à travers le mur de façade de la courtine (Fig. 14.A).

²³ Les tours 10, 11 et 14 ont disparu à l'occasion d'importants travaux d'aménagement récents.



Fig. 14 Ancienne Termez, fortifications orientales de la colline de Tchingiz Tepe (cliché MAFOuz de Bactriane ; C. Réalisation M.-O. Perou): A. Vue générale (vers l'ouest) de la colline de Tchingiz Tepe et des fortifications kouchanes; B. Tours 3 à 1 de la fortification orientale du Tchingiz Tepe au sommet de la colline. Vue vers le nord; C. Coupe restituée du rempart oriental du Tchingiz Tepe.

Au-delà de la tour 3, la différence de niveau du pied de la tour 4 à celui de la tour 9 est de 7 m sur une longueur de 200 m.²⁴ Depuis le nord de la tour 4 jusqu'au sud de la tour 9, la muraille est massive et ne présente aucune trace de corridor intérieur. Les courtines ont une épaisseur de 5 à 5,4 m, sauf entre les tours 5 et 6 où l'épaisseur n'est que de 4 m. L'existence de deux coups de sabre visibles dans cette courtine suggère l'idée qu'il y aurait eu ici une interruption de 3,5 m dans le tracé de l'enceinte. Sans doute une porte ou une poterne bouchée par la suite.

*Le retour vers le sud de la muraille à corridor :
de la tour 1 à la tour 3*

L'imposante tour 1, (20 m nord-sud et 15 m est-ouest), située à l'angle des deux lignes de fortification, consistait à l'origine en un massif unique carré, à cheval sur les

deux côtés de l'angle, les faces nord et est présentant un front de 13 m de large. Par la suite, pour créer une rampe d'accès à une plateforme cultuelle située à l'arrière de la muraille nord, on a remplacé la tour d'origine par deux nouvelles tours d'environ 9 × 8 m encadrant la rampe. La tour 2, située à l'endroit où la pente est la plus forte, s'est en partie effondrée (Fig. 14.B).

La tour 3, l'une des mieux conservées de la fortification de Tchingiz Tepe 1, est la seule qui donne une idée des tours de ce secteur. Elle mesure 12,8 m de large à la base avec une projection de 9,6 m. Les trois façades de la tour présentent un léger fruit et sont ornées de quatre archères au nord et au sud et cinq à l'est. Le sommet de la tour révèle que celle-ci a subi un chemisage extérieur épais d'environ 2,60 m. Sa façade orientale a été reconstruite et les autres murs ont été épaissis.

²⁴ Au total, du pied de la tour 1 à celui de la tour 9, l'altitude passe de 323,77 m (angle n-o de la tour 1) à 303,06 m (angle s-e de la tour 9).

Les archères sagittales datent de la mise en place du chemisage extérieur : elles sont donc aveugles.

La partie basse de la fortification orientale de Tchingiz Tepe (tours 4 à 9)

Les tours

En plan, toutes les tours sont plaquées contre la muraille, avec une largeur de 8 m et une projection variant de 5,5 à 6,9 m. Toutes comportent un chemisage extérieur qui leur confère une largeur de 11 à 12,5 m et une projection de 7 à 8 m. Toutes possèdent un local intérieur mesurant à l'origine 4 à 4,5 m nord-sud et 3 m environ est-ouest. Certaines de ces chambres ont été chemisées, ce qui réduit d'autant leur profondeur. La plupart des tours ont servi de logement après l'abandon de la muraille.²⁵

Les courtines

Avant le chemisage des tours, les courtines mesuraient 25 m en moyenne. Une fois les tours renforcées, les courtines ne mesurent plus que 20 à 22 m. La base des courtines est pleine. On accède donc directement aux chambres des tours par une porte large de 90 cm donnant sur un étroit couloir de 1 m de large et de 5 à 6 m de long qui traverse toute l'épaisseur de la courtine d'ouest en est. Deux massifs repérés à l'arrière de la courtine C3-4 correspondent à des escaliers d'accès au chemin de ronde.

La face occidentale de la muraille

La face interne de la muraille et ses abords ont été étudiés grâce à deux sondages, à l'arrière de la courtine 5-6 et de la courtine 7-8, ainsi qu'à une coupe sur la courtine de la tour 8.

Au nord et au sud de la courtine C5-6, deux placages de maçonnerie, épais de cinq briques, peuvent être interprétés comme des massifs d'escaliers donnant accès au chemin de ronde de la courtine.

Dans les trois sondages, on constate la présence d'un mur construit en *pahsa*, épais de 0,9 m, qui longe la face occidentale de la courtine à 1,15 m de celle-ci.

On observe que la face orientale de la courtine repose sur une épaisseur de 10 cm de couches d'accumulation. La courtine actuellement visible succéderait donc à une construction antérieure. Le matériel contenu dans la couche d'occupation du couloir ainsi formé date du début de la période kouchano-sassanide.

La coupe à l'arrière de la tour 8 a révélé que la courtine, épaisse de 5,35 m, se compose en réalité d'une première maçonnerie originelle de 3,25 m d'épaisseur à l'est, doublée à l'ouest d'un placage de 2,1 m d'épaisseur, preuve d'une reconstruction après une dégradation et un effondrement partiel de la face de la courtine originelle. Il n'y a donc vraisemblablement pas eu de reconstruction complète d'une muraille antérieure de plus de 5 m d'épaisseur, mais plutôt une réfection d'une enceinte de 3,25 m d'épaisseur par un placage de 2,1 m, ce qui a porté l'épaisseur totale de la muraille à 5,35 m. En revanche, aucun indice ne permet de penser que la façade orientale a subi le même type d'opération.

Le matériel céramique le plus ancien contient plusieurs tessons d'époque Yue-Tchi. Le rempart actuellement visible succède donc à une fortification pouvant remonter à la première époque kouchane (début du 1^{er} siècle ap. J.-C.) sur le même tracé.

La façade de l'enceinte et les défenses avancées

En façade, les courtines et les tours étaient couvertes d'un décor en creux caractéristique, archères vraies ou fausses et lucarnes, jouant sur les contrastes d'ombre et de lumière comme à Bactres, Surkh Kotal ou Dil'bergine. Les archères, toutes de forme sagittale, sont visibles sur les tours 3, 5 et 6 et les courtines 3-4, 4-5 et 6-7. Dans le chemisage des tours, les archères sont aveugles. Les placages de maçonnerie, intérieurs et parfois aussi extérieurs, ont naturellement obstrué les archères (Fig. 5.3).

Le dégagement de toute la façade du rempart oriental a également révélé la présence d'une couche homogène de remblai de rocher, accumulée contre la muraille, de la tour 4 à la tour 9. Ce remblai, d'une épaisseur de 70 cm, recouvre le pied de la façade des tours et des courtines, pratiquement jusqu'au sommet d'une série d'archères sagittales qui avaient été masquées sous un enduit de terre. Il y a donc eu un relèvement du niveau du sol à l'avant de la muraille à la dernière époque de son fonctionnement. Cette masse de matériel provient du creusement d'un fossé associé à la muraille.²⁶ À une vingtaine de mètres à l'est des courtines, cette couche est limitée par une maçonnerie de briques de 35 cm de côté de direction nord-sud, conservée sur au moins treize assises, soit une hauteur d'environ 1,5 m.

Ce mur retient le remblai au bord d'un large fossé nord-sud (12 m) creusé dans la roche en place jusqu'à une

²⁵ Dans la tour 8, cette réoccupation s'est produite après la chute de briques, sans doute due à un séisme. Le sol a été établi sur des décombres de briques et le mur oriental a été décalé de la largeur d'une brique vers la courtine.

²⁶ Comme, par exemple, à l'avant du rempart hellénistique de la ville basse d'Aï Khanoum.

profondeur de plus de 3 m. Le comblement de ce fossé est constitué par du sable éolien non remanié qui n'a fourni que de rares fragments de céramique commune difficilement datable.²⁷ Ce mur et le fossé qu'il borde ont été retrouvés face à la tour 4 et à la tour 9.

Dans son dernier état, la fortification orientale du Tchingiz Tepe aurait donc été protégée par un puissant fossé bordé, du côté de l'enceinte, par un mur de briques qui avait pour fonction de retenir le remblai extrait du fossé et pouvait également jouer le rôle de *proteichisma* (Fig. 14.C).

Ce remblai régulièrement étalé jusqu'aux courtines diminuait d'autant la hauteur de l'enceinte, ce qui paraît paradoxal. Son intérêt réside probablement dans sa texture qui pouvait rendre malaisé le fonctionnement de machines de siège ennemies. Toutefois, l'épaisseur de la couche de débris de roche ne correspond pas au volume de matériaux extraits du fossé, même si l'on fait l'hypothèse d'un simple recreusement. On peut donc supposer qu'une partie du remblai a été entassée à l'est du fossé, d'où il aurait été éliminé lors de l'aménagement général de ce secteur au XX^e siècle.²⁸

c) Bilan chronologique de la fortification du Tchingiz Tepe

Dans sa partie basse, la fortification orientale consiste en un mur de briques massif, épais de 3,15 m, car de plain-pied avec le terrain environnant, et donc susceptible d'être soumise à l'action de machines de siège, dont G. Pugatchenkova a décrit les effets sur les fortifications de Dal'verzine Tepe.²⁹ Les tours sont creuses à la base, avec des chambres de tir d'environ 4 à 5 m de côté accessibles par d'étroits passages traversant l'épaisseur des courtines. Une rue large de 3 m longe la muraille. D'après le matériel associé, ce premier état serait du début de l'époque kouchane.

Par la suite, la fortification est fragilisée (par un séisme ?), ce qui entraîne d'importantes modifications sous deux formes :

- Sur l'enceinte orientale basse (tours 4 à 9), la façade interne est épaissie par un placage qui porte son épaisseur à 5,35 m. Au sol, la rue du rempart devient un couloir de circulation de 1,7 m de large à partir duquel on accède aux chambres des tours. À l'étage, cela permet d'aménager un corridor entre les tours 4 et 9. À l'extérieur, la façade ne semble pas avoir subi de modification, mais les tours sont consolidées par un chemisage, ce qui réduit les courtines à 20 m.
- Dans la partie élevée de la muraille (tours 3 à 1), les tours reçoivent également un chemisage. En revanche, entre la tour 1 et la tour 4 (et sur la crête de la colline) la pente étant trop raide pour faire fonctionner des machines de siège, on construit directement au niveau du sol des courtines avec un corridor qui prolonge celui de l'étage de la partie basse et d'où l'on peut tirer sur l'assaillant à sa hauteur.

La transition d'une partie à l'autre de l'enceinte se fait simplement entre les tours 4 et 3 : le corridor qui court sur la partie pleine de la muraille en zone basse aboutit directement au nord contre la pente qui escalade la colline.³⁰ La hauteur de l'enceinte étant ainsi diminuée, la difficulté pour les défenseurs d'atteindre le sommet de la fortification était atténuée. La muraille à corridor de la partie basse se prolonge donc directement sur la pente elle-même vers le nord, jusqu'à la tour 1, puis se poursuit, toujours au sol, sur la crête nord de la colline jusqu'à la rive du fleuve.

Dans cette dernière partie, de la courtine 1-11 à la tour 15, le rempart, qui était sans doute très endommagé en raison de la fragilité de sa fondation, a été entièrement reconstruit avec des tours et des courtines de mêmes dimensions qu'auparavant.

À l'époque kouchane tardive, la fortification orientale basse qui avait été laissée dans un relatif état d'abandon, est remise en fonction avec le (re)creusement du fossé. Quant au réaménagement de la tour 1, il a visiblement été provoqué par la création d'un nouveau couloir de circulation contournant la tour 1 et protégé par un

²⁷ Ce parementage a été également retrouvé au sud, face à la tour 9, dans un sondage limité au repérage de l'emplacement de la paroi occidentale du fossé.

²⁸ Un aménagement dont témoignent éloquentement de nombreuses traces de chenilles de puissants engins mécaniques sur la surface du rocher.

²⁹ Pugachenkova 1978. Rappelons que la courtine C5-6, épaisse de 4 m, constitue une exception, probablement parce qu'il s'y trouvait une porte à travers l'enceinte, bouchée par la suite.

³⁰ C'est à cet endroit que la muraille basse aboutit contre la pente raide du sommet de la colline et c'est là que le corridor de la partie haute se serait prolongé à l'étage sur toute la longueur de la partie basse. Le niveau du corridor à son extrémité sud nous donnerait alors celui du corridor régnant sur la muraille pleine à cet endroit, donc la hauteur de la partie pleine dans la muraille entre les tours 4 et 9.

nouveau mur à l'est et une nouvelle tour au nord pour des raisons autres que défensives.

Enfin, la fortification est abandonnée et sert essentiellement d'espace d'habitation puis de sépulture. Les monnaies associées à cet état datent de la fin du V^e jusqu'au VII^e siècle ap. J.-C.

Conclusion générale

Visiblement, sous les Kouchans, la fortification est une condition et un symbole du pouvoir. Cela traduit un goût incontestable pour un certain type de décor codifié, très caractéristique, et une tendance certaine à l'ostentation. Deux aspects qui ne sont pas très éloignés de la pratique du pouvoir achéménide.

Sur le plan technique, on est frappé par une relative homogénéité des réalisations de cette période. Il existe à l'époque kouchane une véritable science des fortifications, très marquée au départ par le modèle hellénistique tel qu'on peut le percevoir à travers le rempart hellénistique de la dernière phase d'Aï Khanoum. C'est-à-dire une poliorcétique héritière des fortifications conçues pour la lutte contre la machinerie de guerre, mais aussi adaptées aux conditions de la guerre à cheval avec une défense active : tours creuses, galeries, archères nombreuses, fossé parementé, etc.

Entre le nord et le sud de la Bactriane-Tokharestan, il n'existe aucune différence dans le traitement des fortifications. Le modèle des murailles de 3 m d'épaisseur à tours quadrangulaires creuses ou non, aux courtines courtes (moins de 25 m) et pourvues d'un décor abondant et systématique se poursuit durant plusieurs siècles. Il est ensuite remplacé par le modèle à façades gaufrées de Margiane, des murs à tours larges et peu saillantes, comme à Bactres ou à Kafir Kala au Tadjikistan, ou par le type de mur-écran à tours semi-circulaires d'époque sassanide puis islamique, sans décor réel, de type Zar Tepe.

Certains *aspects techniques* sont fréquents dans les fortifications kouchanes :

L'utilisation du fossé

Le rôle majeur des fossés apparaît très tôt, comme on le voit déjà sur la citadelle d'Aï Khanoum, après l'abandon de cette ville par « les Grecs » (2^e moitié du II^e siècle av. J.-C.). La citadelle et une partie de la ville haute ont alors été fortifiées à l'époque Yue Tche et kouchane sous la forme d'un rempart de faible élévation. Il s'agit non pas, comme à l'époque « grecque », d'une muraille précédée d'un fossé, mais plutôt d'un important fossé défensif au profil dissymétrique, large de 13 m et profond de 4 m. Le versant du côté des défenseurs est revêtu d'un parement de briques de 42 à 44 cm de côté, disposées sur un rang et demi de profondeur. Cela donne à ce versant opposé l'aspect d'une véritable muraille reposant sur le fond du fossé. Plutôt qu'un rempart construit en élévation, précédé à son pied d'un fossé, on aurait donc un fossé-rempart d'une conception tout à fait particulière. Par la suite, un mur de *pahsa* épais de 1,75 m et parementé sur ses deux faces à l'aide de briques de 35 cm de côté, a été construit le long du fossé, un peu en arrière de celui-ci. Le sol associé a livré un matériel d'époque kouchane. Le fossé date donc de l'époque pré-kouchane et le mur de *pahsa* parementé de l'époque kouchane. L'ensemble a ensuite été définitivement abandonné.

Le grand fossé du Tchingiz Tepe présente exactement les mêmes caractéristiques. Mais on trouve également des grands fossés sans eau à Dal'verzine Tepe, à Zar Tepe (autour de la ville et de la citadelle), probablement au pied de la citadelle de Dil'bergine Tepe ou le long des remparts de Bactres. Cette technique connaît ensuite un grand développement dans toute l'Asie Centrale.³¹

Outre l'obstacle majeur qu'il offre aux assaillants, un fossé présente un autre intérêt sur le plan défensif. Son creusement fournit, en effet, des remblais abondants qu'on utilise pour créer une zone d'instabilité du sol à l'avant de la muraille, afin d'entraver l'approche des machines. Rappelons que cette technique, déjà employée dans l'Aï Khanoum hellénistique, a été appliquée au Tchingiz Tepe, avec, sans doute, la même fonction.

La rue du rempart

Existe-t-il une rue du rempart dans les fortifications kouchanes, comme c'est la règle dans l'architecture militaire grecque ? C'est encore le Tchingiz Tepe qui peut

³¹ Que l'on se réfère, par exemple, au grand fossé médiéval creusé au nord de la ville d'Aï Khanoum où l'enceinte de la ville basse, très usée, a été enfouie sous un important remblai de galets provenant d'un large fossé dont, malheureusement, on ignore encore qui en a ordonné le creusement, sans doute au Moyen Âge. Fussman 1987, doute avec raison que ce remblai date de l'époque kouchane, comme je l'avais d'abord envisagé dans ma publication.

nous fournir un début de réponse. On sait, en effet, que le mur de *pahsa* parallèle à la face interne de la muraille orientale est antérieur au placage de cette face de la courtine. On aurait donc eu, le long de la courtine, avant le placage, un espace vide de plus de 3 m de large délimité par un mur parallèle à la muraille et qui, comme dans la fortification grecque, servait à la circulation. Une sorte de rue du rempart en somme.

Par la suite, c'est la construction du placage épais de plus de 2 m contre la courtine qui a réduit cet espace à la largeur d'à peine plus d'un mètre. Ce dispositif malcommode a cependant été conservé constituant une sorte de couloir arrière, peut-être couvert, desservant les locaux dans les tours et, sans doute, les escaliers d'accès à l'étage de la fortification.

La fonction des archères et des fausses lucarnes

La présence d'archères sagittales multiples à divers niveaux d'une fortification kouchane devait susciter la crainte chez l'ennemi. En réalité, ces archères, qu'elles soient droites ou en éventail, n'avaient qu'un très faible rôle défensif, puisqu'elles n'étaient pas ébrasées à l'intérieur et que leur largeur ne dépassait pas 15 cm pour une longueur d'au moins 1,5 m. Une telle disposition ne permettait aucune visée pour un archer. Ces archères avaient donc un rôle d'éclairage et/ou de ventilation pour celles qui étaient percées aux deux extrémités, et un rôle décoratif ou dissuasif pour celles qui étaient aveugles.

Quant aux fausses lucarnes aussi fréquentes que les archères, elles n'avaient qu'un rôle décoratif et peut-être aussi apotropaïque, dans la mesure où leur forme rappelle celle d'un oiseau aux ailes déployées comme le *garuda*, oiseau sacré très présent dans le décor bouddhique.

Brique et pahsa

Sur la plupart des fortifications kouchanes, on peut observer dans la construction l'emploi du *pahsa* combiné à celui de la brique crue. Cette technique peut être utilisée pour régulariser la topographie du terrain. Ainsi, au Tchingiz Tepe, le *pahsa* est-il utilisé pour rattraper la dénivellation entre les deux parties de la courtine C3-C4 et créer un niveau sur lequel aboutissait le corridor intérieur de l'étage de la muraille orientale basse. D'un autre côté, on a vu que le soubassement débordant de la tour 13 était fait de *pahsa* recouvert de briques. Dans l'élévation, les tours et les courtines sont édifiées en

briques, mais le mur du couloir arrière de la fortification basse est entièrement en *pahsa*.

Ailleurs, comme à la citadelle de l'Ancienne Termez, on rencontre des alternances d'assises de même hauteur de *pahsa* et de briques crues (environ 50 cm) dans la structure des murailles kouchanes. Cette technique était sans doute destinée à empêcher la propagation des fissures verticales dans les murs, mais n'avait aucun rôle militaire ou esthétique.

L'architecture kouchane révèle donc une bonne connaissance des qualités et servitudes de la brique crue et du *pahsa*. Elle pratique avec une prédilection croissante les façades à fruit de plus en plus prononcé ou les voûtes à claveaux obliques. Elle accorde également un soin particulier à l'entretien des façades, qui sont régulièrement recouvertes d'enduit de terre mélangée de paille et même de duvet de roseaux et blanchies à la chaux.

Il est vrai que la brique crue implique de fréquentes réfections et reconstructions plus ou moins complètes, ainsi que des placages/doublages renforçant les maçonneries, rendant plus complexe l'étude des fortifications d'Asie Centrale. En revanche, ces ouvrages sont moins pillés que les fortifications en pierre et sont mieux datables par le matériel associé et le format des briques.³²

C'est ce qui fait que la plupart du temps ces fortifications ont été étudiées pour la datation des sites qu'elles protègent, en particulier par la technique de la tranchée, et non comme des monuments à fonction spécifique. D'où la faible connaissance de la fortification kouchane dans le monde des poliorcètes.

Il faut donc saluer le développement des études tenant plus compte de l'architecture, de l'aspect extérieur, de la technologie de la construction et des techniques de guerre. Les fortifications sont conçues en fonction de stratégies défensives particulières, développées dans un certain type de sociétés, répondant elles-mêmes à certaines techniques de guerre. Mais elles sont aussi héritières d'organisations sociales et de techniques défensives antérieures. Elles constituent une source d'informations précieuses pour l'historien, qui peut ainsi compenser – au moins en partie – la criante indigence des données textuelles.

³² On peut obtenir de bonnes datations grâce à l'évolution du format des briques dont les côtés s'amenuisent (de 38 à 32 cm) mais dont l'épaisseur augmente (de 10 à 15-16 cm).

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The Fortifications of Athens and New Field Research

INTRODUCTION

Rune Frederiksen

From many points of view Athens was the most important ancient Greek city-state. The history of its fortifications, however, as well as the circumstances surrounding their preservation, accessibility and research is as typical and illustrative as that of almost any ancient Greek *polis*. The inspiration for including studies on the walls of Athens first as papers at the conference and then as articles in this volume – in addition to the fact that the conference took place in modern (and on top of ancient) Athens – came from a handful of very stimulating responses to our call for papers, two of which materialized as papers and articles in the present session.¹

The fortifications of Athens constitute as long a history as the city itself. Best known are perhaps the walls of the 5th century, which, from the time of Themistocles onwards, included the long walls to the Piraeus.² But we also know of earlier walls, the Mycenaean fortification of the Acropolis,³ and the famous much disputed lower circuit from Archaic times. Although we have indisputable written testimony to the existence of the latter, not a single stone has so far been convincingly interpreted

as deriving from such an Archaic circuit.⁴ The traces from the Classical and Hellenistic walls of Athens are everywhere in and under modern Athens, if one begins to look for them, and they have recently been described in an excellent manner by Anna Maria Theodoraki in a major article in the *Hesperia* from 2011: ‘The ancient circuit wall of Athens: Its changing course and phases of construction’. The contributions on Athens in this session concentrate on late Antiquity, a period which is less well known to the general scholarly community, but to which Athens has many ruins and studies to offer.

The Fokus Fortifikation Network did not particularly address ‘new finds’ at its previous meetings, since this is obviously a topic which feeds into all sorts of research themes and very often is difficult to handle in a methodological and scholarly manner, because of lack of publication. We are therefore particularly happy to be able to present papers on important new findings of ancient Greek fortifications, and in this way accommodate early preliminary publication to the international scholarly community. With Corinth, we are able to provide a good

¹ There is a third contribution in this volume, pp. 384–396, by C. Parigi, on the Athenian walls of the 1st century BC.

² Conwell 2008.

³ Travlos 1971, 52–7, cf. Papadopoulos 2003, 303 (with refs).

⁴ For the most recent and important studies (all with extensive bibliography), see Papadopoulos 2008; Theodoraki 2011, 72. Cf. Frederiksen 2011, 32.

example of how an old excavation re-focuses, and does it on fortifications, how new methods of study enable us to say new things about old material. The new finds at Corinth, is an example of a substantial find that we had no idea existed, a find which is a wake-up-call in terms of what we need to be prepared for is still out there. Fortifications, huge and monumental as we know them, are in fact able to disappear completely, and then suddenly pop up again, even at well-known ancient cities where we have been excavating for more than a hundred years.

It is appropriate in this introduction to the last section to direct our colleagues' attention towards the importance of new finds, and to urge the international archaeological community not only to further new excavations and other attempts at creating new primary data for this area of ancient architectural and social studies, but also to further the research of individual fortifications known for decades, and which have perhaps never been properly investigated or have been investigated a long time ago, when methods and emphasis of interest were different. As the editors write in the introduction for this volume (above pp. 1–7): ancient fortifications constitute a huge source of knowledge to be harvested, developed

and created, knowledge and information not only about ancient architecture, but about ancient societies in a much wider sense.

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THE MIDDLE BRONZE AGE FORTIFICATIONS ON THE ASPIS HILL AT ARGOS

Anna Philippa-Touchais

Abstract

The Aspis or Prophitis Ilias is one of the two hills – the other being the Larissa – that dominate the town of Argos. Both were fortified in the Bronze Age. The Aspis hilltop was first excavated by Vollgraff (1902–3) who uncovered numerous Middle Helladic buildings and sections of two successive enceintes. Fortified sites of the MBA, although well known in the Aegean islands, were particularly rare in mainland Greece. Therefore, one of the main interests of the Aspis is precisely that it provides a rare example of a Middle Helladic fortified settlement. Another interest is the re-use of the outer enceinte, of Cyclopean masonry, in the fortification wall of historic times. Recent excavations conducted by the French School brought to light new evidence on the exact dating, course and function of the MBA circuit walls, as well as their relationship to the historic fortification.

It has been confirmed that a fortification wall was constructed by the second half of the Middle Helladic in association with a rearrangement of the settlement that gave to it an imposing concentric layout. Through these elaborate architectural settings the community of Argos was probably seeking to maximize its social position, and to affirm its identity. However, shortly afterwards, at the beginning of the Mycenaean period, the acropolis of Argos was abandoned for as yet unknown reasons. Its fall to ruin during most of the Mycenaean period was possibly the result of deliberate political and symbolic decisions. Later, in the late Classical and early Hellenistic periods, a fortification wall was rebuilt, re-using in various ways the prehistoric circuit.

The Aspis or Prophitis Ilias (most probably called *Deiras* in Antiquity)¹ and the Larissa are the two hills that dominate the town of Argos to its north-west and west respectively (Fig. 1). While the Larissa is high (287 m) with steep slopes and a limited plateau, the Aspis is a

low mound (c. 116 m high) of smooth, rounded form – to which it must owe its name: the ‘shield’. The summit plateau of the Aspis measures c. 200 m north-south by c. 150 m east-west, c. 3 hectares in area.

¹ Lambrinoudakis 1970; Croissant 1972.



Fig. 1 Aerial photo of Argos (1956). View from the North (photo: EFA).



Fig. 2 Topographical plan of the Aspis summit, after Vollgraff 1907, pl. V. (EFA).

Old and recent research

Both hills were fortified in the Bronze Age. They were excavated by Vollgraff, a Dutch member of the French School at Athens, who extensively investigated Argos in the early 1900s. The top of Larissa was defended by a Mycenaean circuit wall but no buildings of that period were found within it.² On the Aspis hilltop, Vollgraff unearthed numerous ‘pre-Mycenaean’ buildings³ in two sectors, the central, and the eastern (Fig. 2), and sections of two successive circuit walls, the *inner enceinte* and the *outer enceinte*, the latter being of ‘Cyclopean’ masonry.⁴ Moreover, Vollgraff observed that the ‘Hellenic’ fortification wall was partly constructed on the foundations of the Cyclopean ‘pre-Mycenaean’ outer *enceinte*.⁵

Recent excavations on the hill (1974–90, 2011) in two different sectors, the south-eastern and northern (Fig. 3), and cleaning seasons (2006–8) in the eastern sector (previously excavated by Vollgraff), were conducted by the French School, under the direction of Prof. G. Touchais and myself. This research brought to light new evidence on the layout and a more precise dating of the Middle Helladic settlement.⁶ Among the project’s objectives was to define the course, dating and function of the Middle Helladic *enceintes*.⁷ More recently (2009–13), a new project was undertaken in collaboration with Sylvian Fachard aiming to study the historic fortification and its correlation with the ‘Cyclopean’ outer *enceinte*.⁸ While study of the Aspis vestiges is still in progress, I wish to discuss in this paper some preliminary results concerning the Middle Bronze Age *enceintes*.

Specific interest and aims of the study

Fortified sites of the MBA, although well known in Aegean islands (for example at Kolonna on Aegina,⁹ Haghia Irini on Keos,¹⁰ Phylakopi on Melos,¹¹ and Palamari on Skyros¹²), are particularly rare in mainland Greece. It is worth underlining that all the mainland examples, such as Kiapha Thiti¹³ and probably Brauron in Attica,¹⁴ Malthi¹⁵ and Pylos in Messenia,¹⁶ as well as the recently excavated Megali Magoula at Galatas Troezenias,¹⁷ date to the latest phase of the Middle Helladic or the transition to the Late Helladic period. Therefore, one of the main interests of the Aspis is precisely that it provides a rare example of a Middle Helladic fortified settlement, dating even earlier than all the known examples.

Nevertheless, it has to be stressed that since the study of the Aspis stratigraphy and pottery has not yet been fully completed, the exact dating of the MH fortification cannot be accurately confirmed. What can be confirmed, however, according to the evidence, is that the construction of the *enceinte* was conceived and materialized by social groups strongly embedded in the MH tradition and not oriented towards the concepts and behaviours of the new, Mycenaean era (see also below).

Furthermore, the ‘Cyclopean’ wall was largely re-used in historic times, probably in the late Classical and certainly in the early Hellenistic periods.¹⁸ This later integration of the MH fortification wall can provide interesting information on various aspects concerning the construction and reconstruction in the same place of a monumental building: namely aspects of conceptual,

² Vollgraff 1928; Vollgraff 1930; Hope Simpson & Dickinson 1979, 44; Piteros 2003; Hope Simpson & Hagel 2006, 39; Crouwel 2008.

³ Actually Middle Helladic (c. 2000–1650 BC).

⁴ Vollgraff 1907, 140–3, 150–1.

⁵ Vollgraff 1907, 150–1.

⁶ For full bibliography, see Philippa-Touchais 2010, 792–6, mainly 792 n. 43, 795 n. 57.

⁷ Touchais 1975, 707.

⁸ Fachard 2010; see also Morgan *et al.* 2010, 27; <http://chronique.efa.gr/index.php/fiches/voir/1360/>; on the 2011 excavation season see Philippa-Touchais *et al.* forthcoming; <http://chronique.efa.gr/index.php/fiches/voir/2635/>.

⁹ Walter & Felten 1981; Walter 2001.

¹⁰ Davis 1986, 8–15; Overbeck 1989, 119–21.

¹¹ Renfrew 2008, 53–64 (the earliest fortification wall is now dated to the LC I).

¹² Parlama *et al.* 2010, 281–9.

¹³ Lauter 1995; Hagel 1992; for a recent overview with extensive bibliography, see Hope Simpson & Hagel 2006, 27, 66–7; see also Alusik 2010, 886–7.

¹⁴ For a recent overview on the fortification evidence, with extensive bibliography, see Hope Simpson & Hagel 2006, 68; on the stratigraphy of the site, see Kalogeropoulos 2010.

¹⁵ Valmin 1938, 76–8; Hope Simpson & Hagel 2006, 56–7; for an interesting discussion on the defensive character of the settlement, see Wright 1994, 44–6.

¹⁶ Hope Simpson & Hagel 2006, 52–3 (overview with extensive bibliography).

¹⁷ Konsolaki-Yiannopoulou 2010, 67–76.

¹⁸ Fachard 2010, 555–60, mainly 555–7.

technical, historical and symbolic character, such as the diachronic meaning and use-strategies of landscape, the exploitation of natural resources, changes in spatial organization, differential defensive construction techniques (according to novel means, needs and aspirations), agencies of integration, and ultimately issues related to the display of power and the formation of social memory and identity.

I will focus here on the following points concerning the MH enceintes of the Aspis hill:

1. A brief presentation of the available evidence concerning their preservation, masonry, course, dating and function; emphasis will be on the outer enceinte which offers more conclusive evidence and played a more important role in the diachronic fortification of the hill.
2. A brief overview of the socio-political and ideological context that favoured the construction of the monumental outer fortification wall but also led to its abandonment, and
3. The 'afterlife' of the monument, namely the persistence of its ruins in the landscape as records of social memory and history.

The available evidence

THE INNER ENCEINTE

The presence of the inner enceinte is actually attested by only one visible section in the eastern sector of the settlement (Fig. 4).¹⁹ This section (orientated approximately north-south) is c. 7.5 m long,²⁰ and preserved in one course of stones (c. 0.35–0.4 m high); its width is c. 1.4 m. This relatively massive wall is built with two faces of large unworked stones blocking an internal filling of small ones.

Vollgraff had discovered two sections of a stout circuit wall (IK) on top of the settlement (central sector), and four others (LM) on a lower plateau to the east (eastern sector) (Fig. 2).²¹ He assumed that all these sections



Fig. 4 Aspis, east sector. On the right the preserved section of the MH inner enceinte; in the middle the W long wall of house ZA, parallel to the enceinte. View from the North (author's photo, EFA).

belonged to a single circuit wall, the inner enceinte, encircling a part of the habitation area (actually the north-eastern part). However, the tracing of the inner enceinte, as designated by Vollgraff, is uncertain: several recent exploratory test-trenches on its presumed course failed to locate it.²² More recently, based on the results of a project on the study of the entire settlement layout,²³ we have suggested that sections IK and LM possibly belonged to two different enclosures: the two sections on top of the hill (IK) were presumably part of a wall surrounding the central, highest terrace of the settlement, while the sections in the eastern sector (LM) probably belonged to a circuit (?) wall bounding the intermediate terrace.²⁴ The tracing of the latter wall might be roughly parallel to that of the outer enclosure. If this suggestion is true, there were in all not two but three circuit walls.

Dating

According to Vollgraff, the inner enceinte was supposed to be slightly older than the outer one. He observed that

¹⁹ Philippa-Touchais & Touchais 2007, 965–6 and figs 9–10.

²⁰ Some 3–4 massive stones (c. 0.40–0.50 × 0.60 m), still preserved *in situ*, indicate the course of the wall in a length of 7 more metres towards the north.

²¹ Vollgraff 1907, 141 and fig. 1; the sections on the central area, by the chapel of Prophitis Ilias, are not visible anymore, probably backfilled and re-covered by modern constructions (a road and the terrace around the chapel).

²² Touchais 1975, 707; Touchais 1976, 755, fig. 9; Touchais 1978, 802; Touchais 1980, 699.

²³ The 'Topographical and Architectural Project of the MH Aspis Argos (2005–2008)' co-funded by the Institute for Aegean Prehistory (INSTAP) and the French School at Athens (EFA).

²⁴ Philippa-Touchais & Touchais 2006, 721, fig. 18; Whitley *et al.* 2006, 32, fig. 48; Philippa-Touchais 2010, 793, fig. 10.

the north-west corner of House N (which was supposed to be more recent) encroached on the foundation of the circuit wall, and assumed that the latter was already partly demolished when the house was built.²⁵ New evidence which came to light during the recent cleaning in the eastern sector (2006–8), seems to confirm this dating: House ZA (just outside the inner circuit), assigned to MH II, is exactly parallel to the circuit (Fig. 4). In addition, the remains of a paved area with small stones (of the same MH II phase), possibly a passageway (c. 2 m wide) between the house and the circuit, reinforce the hypothesis that the two structures were connected. This architectural correlation between the pavement, House ZA and the inner circuit suggests that they could be contemporary and therefore that the latter must antedate the outer circuit.²⁶

Function

The width of the inner enceinte (c. 1.4 m), and in particular its masonry with two strong faces, implies a defensive rather than a terrace wall. However, the almost certain presence of contemporary houses and a pathway outside the wall does not appear to support this hypothesis – since a defensive wall is supposed to encircle all contemporary constructions. It is very probable that the settlement at the time of the inner enceinte (MH II?) was extended outside this wall. In that case it was already a sort of ‘inner enceinte’, but it cannot be confirmed if there was an outer one at that time. At this stage of the study, the most probable assumption we can make – although quite intriguing – is that, at the time of its construction, this wall was intended to enclose part of



Fig. 5 Aspis, plan of the north sector. The architectural phases of the circuit wall at its junction with the salient. Inside the fortification, the remains of successive MH houses (plan W. Philippa, EFA).

²⁵ Vollgraff 1907, 141.

²⁶ Philippa-Touchais & Touchais 2008b, 777 and fig. 2.



Fig. 6 Aspis, north sector: aerial photo (photo: K. Xenikakis, EFA).



Fig. 7 Aspis, north sector. The inner face of the MH fortification wall (west section, outside the HL salient). View from the south (author's photo, EFA).

the habitation area. In MH III it seems that the wall was no longer standing or that it had lost its initial function; in that case, its ruins may have served to retain the upper terrace or to organize space.²⁷ Further possibilities are that the wall fell out of use before its construction was finished, or that the ambitious project to construct the wall was abandoned before its completion.

THE OUTER ENCEINTE

The outer enceinte of the MH settlement is currently preserved in two areas: 1) the northern sector – next to the western entrance of the triangular Hellenistic salient (bastion Z),²⁸ and 2) the eastern sector – next to the eastern entrance of the same salient (Figs 2–3).²⁹ In the south-east sector its presence is not conclusive.

The northern sector contains the best-preserved stretch of the MH outer enceinte despite the fact that several modifications were made in later phase(s), mainly during the construction of the Hellenistic salient (Figs 5–6). The enceinte section (oriented approximately east–west) is about 13 m long, forming a slight angle approximately halfway along the section.³⁰ The western half is outside the entrance of the salient, while the eastern half is inside the entrance or passageway of the salient. The preservation of these two parts is quite different.

In the western half (outside the salient), the preserved width of the section is c. 3 m but this was certainly not the original width of the wall, since its exterior face has



Fig. 8 Aspis, north sector. The outer face of the MH fortification wall (east section, inside the passageway of the HL salient). View from the north (author's photo, EFA).

²⁷ Philippa-Touchais & Touchais 2008b.

²⁸ Touchais 1984, 851, figs 9–10.

²⁹ See notes 4 and 5 above.

³⁰ This angle is due to later modifications.

been replaced by carved blocks during renovation works at a later period. During these works, some conglomerate rectangular blocks have been added to the filling of the wall. However, its original width cannot have been significantly different, since the respective section in the eastern sector is 2.6–2.7 m wide. The inner face of the enceinte is well preserved to a height of 0.9 m and two or three courses (Fig. 7). This original inner face is made of rough stone blocks (c. $0.6 \times 0.4\text{--}0.5$ m) with some wedges preserved in the interstices, clearly evoking the Cyclopean masonry.

In the eastern half of the section (inside the passageway of the salient) the outer facing is only preserved to a height of 1.5 m (Fig. 8). It consists of large boulders laid in 1–2 courses. It is worth noting that in this part of the wall all the stones behind the outer face were removed and apparently used for construction or filling of the adjacent curtain of the Hellenistic salient.

In the eastern sector of the settlement a well-known ‘Cyclopean’ section of the wall is visible, oriented approximately north–south (Fig. 9). It is best preserved over a distance of c. 23 m, while c. 15 more metres to the south we can follow its course (up to Tower a) thanks to several isolated boulders apparently still in position.³¹ As in the northern sector, two parts of the wall can be

distinguished with respect to its connection with the salient: the southern part of the wall (approximately half) is outside the entrance of the salient, while the northern part is inside the entrance or passageway of the salient. These two parts have different preservation characteristics; in other words the presence of the salient seems to determine the preservation condition of the enceinte.

In the southern part, the overall width of the wall, 2.6–2.7 m, is maintained in a limited portion (length 2.5 m). Here both facings are preserved, as well as the filling with smaller stones and mud (cores). The height of the outer facing is c. 0.9 m (two courses). As in the northern sector, the outer facing was apparently replaced at a later period (Fig. 9, elevation). However, contrary to the northern sector, here the new blocks are not of carved but, as Fachard quite rightly notes ‘coarsely rectangular and assembled in approximate seating without adding stones as interstices, characteristic of the Cyclopean masonry.’³² The dating of this masonry, not yet identified, must in any case antedate the late Classical period.

In the northern part, in a limited stretch (length 5 m) inside the salient entrance, the wall is preserved to a height of 1.25 m (three courses). It is precisely in this limited stretch that the original facing of the wall is

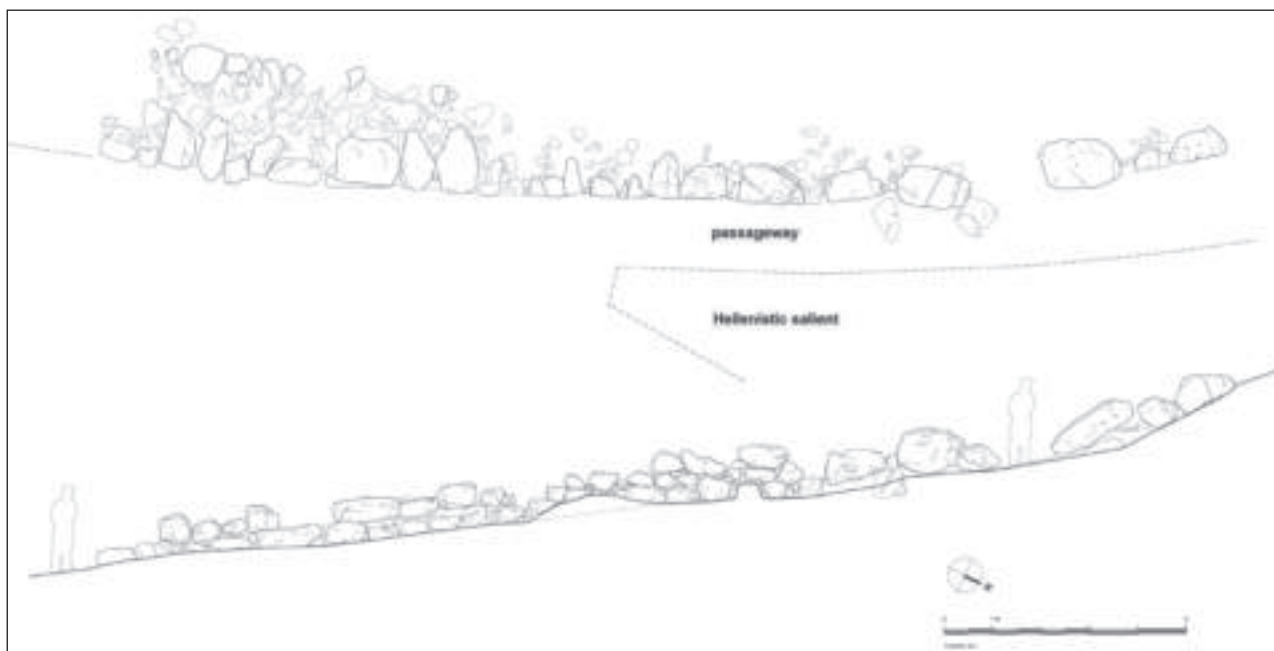


Fig. 9 Aspis, east sector. Plan and elevation of the MH fortification wall, at its junction with the HL salient (plan W. Philippa, EFA).

³¹ Tower (a) used the remains of the Cyclopean fortification as a rear wall, Fachard 2010, 559.

³² Fachard 2010, 555.



Fig. 10 Aspis, east sector. The outer, cyclopean face of the MH fortification wall (north section, inside the passageway of the HL salient). View from the south-east (author's photo, EFA).

preserved: it is constructed with large, uncut limestone blocks, held together with small interstice stones; the latter were placed in most cases horizontally, as wedges to prevent any possible shifting of the 'Cyclopean' blocks (Fig. 10).³³ In some cases (lower part) the bonding mud was also preserved around the wedges. The remaining portion of the wall, further to the north, was built with large boulders but very poorly preserved. It is noteworthy that in this northern part of the wall, only the outer facing is preserved; the inner one has been removed. As in the northern sector (eastern half) the stones were apparently used for the construction or filling of the adjacent curtain of the Hellenistic salient.

To summarize, it is worth noting that in both preserved sections of the MH enceinte the same phenomenon can be observed: the portion of the wall outside the bastion's postern preserves its width, but the outer face has undergone important modifications. In contrast, the portion inside the bastion's postern preserves only its external facing. Therefore the alterations to the MH enceinte are mostly triggered by the construction of the Hellenistic bastion: the sections which were exposed – not protected by the salient – have been consolidated and reinforced by a more stable defence system with carved or roughly carved blocks, while the parts enclosed within the salient – and thus no longer visible – were

left in their original state. This might suggest that, until the construction of the triangular Hellenistic bastion, sections of the MH enceinte were still preserved unaltered in their initial form.³⁴

Course and dating

In the northern sector, the course of the MH enceinte was apparently identical to that of the historical fortification, since the former was modified and re-used by the latter. As regards the structural relationship between the enceinte and the MH buildings within it, it is worth noting that at least one house of the MH II late–IIIA phase (House MI) was positioned exactly perpendicular to the enceinte. Between the northern, short wall of this house and the enceinte there is a distance of about 2 m, where we assume the presence of a passageway.

The enceinte section of the northern sector dates to the end of MH II or the beginning of MH III, according to the stratigraphy and the pottery found in the layers against its inner face. Architectural criteria also support this dating since the enceinte overlies buildings dating to earlier MH phases.³⁵ In addition, the fact that the enceinte is exactly parallel to the north wall of House MI (early MH III) clearly suggests a chronological correlation between these two buildings.

In the eastern sector, the course of the MH enceinte was also identical to that of the historical fortification. As for the relationship between the enceinte and the MH buildings, we can observe that in contrast to the northern sector, here the houses are laid out *parallel* to it. More precisely, Houses N and O, of identical oblong plan, run in a continuous line parallel to the enceinte, at a distance of about 2–2.5 m.³⁶ In this narrow space we assume the existence of a passageway,³⁷ as in the northern sector.

The enceinte section of the eastern sector cannot be dated accurately because important data from the old excavations are lost. However several elements seem to support a dating to the final MH phase.³⁸ One of them is related to the course of Houses N and O, exactly parallel to that of the enceinte. Although uncertain, the dating of these two houses (excavated by Vollgraff) can be tentatively assumed: their plan and layout are identical

³³ On the Cyclopean construction see Loader 1998, 20–32; see also Hope-Simpson & Hagel 2006, 23–6.

³⁴ Fachard 2010, 555.

³⁵ Touchais 1991, 682–6, fig. 30; for the dating of houses of the northern sector see Philippa-Touchais & Touchais forthcoming.

³⁶ Philippa-Touchais & Touchais 2006, 721.

³⁷ See note 36 above, and Philippa-Touchais & Touchais 2008b, 778.

³⁸ Philippa-Touchais & Touchais 2008b, 778.

to two other houses excavated more recently in the south-east sector (Houses MD and ME), and dated with certainty to the final MH Aspis phase (MH IIIB/LH I).³⁹ We have already suggested that all these houses belong to a single architectural complex, the ‘perimeter complex’, and therefore their dating is attributed to the same phase. The ‘perimeter complex’ consisted of a continuous line of identical buildings surrounding at least half of the settlement.⁴⁰ On the basis of its compact and imposing construction⁴¹ and its position just inside the enceinte, we may assume that the complex was probably aimed at strengthening the defence of the settlement, controlling access, and possibly displaying power and prestige.⁴² If, as we believe, the spatial connection between the external enceinte and the ‘perimeter complex’, namely their parallel tracing, denotes a structural relationship, this may imply that they were built as part of the same architectural project.

THE ‘INVISIBLE’ OUTER ENCEINTE IN THE SOUTH-EAST SECTOR

In the south-east sector there are no clear remains of the MH outer enceinte under or in connection with the historic fortification. However, the hill’s steep slope in this area requires the presence of – if not an enceinte – at least a strong retaining wall at the contour line of the late Classical/Hellenistic fortification wall. Indeed, the excavation revealed that one of the long walls of an early Middle Helladic building (MC) extends here right up to the internal side of the late Classical/early Hellenistic fortification wall, abutting a heap of medium-sized stones (Figs 3, 11).⁴³ These stones must have belonged initially to a rather strong MH wall, which closed the east short side of Building MC and at the same time served as retaining wall. The same stones – or the remains of the early MH wall – might have been re-used much later in the construction of the early Hellenistic

polygonal fortification wall. More specifically, they were incorporated in the rear part of the historic fortification, the lower courses of which had no regular inner facing.

In 2011 we investigated the area situated behind the hexagonal Tower Y (Fig. 11).⁴⁴ The rear wall of Tower Y was of an intriguing masonry, preserved to a length of c. 4.5 m and a height of c. 1 m (Fig. 12). In Vollgraff’s topographical plan this wall was described as Hellenistic. However, on the basis of (a) the masonry of its outer, visible face built with large irregular stones⁴⁵ and some wedges, and (b) its location over the course of the historic fortification,⁴⁶ this wall *could* be part of the prehistoric enceinte. Contrary to our expectations, a trench just behind the wall showed that it was no wider than 1 m and that there was no inner face. These two elements seem to confirm its function as a retaining wall rather than an enceinte. Moreover, the pottery found in the fill of the wall securely dates its construction back to the early MH period (MH II?).⁴⁷

To sum up, the rear wall of Tower Y was an early MH strong retaining wall, which was re-used during the construction of the historic fortification. Its original construction suggests an effort to organize the habitation space as early as the MH II. On the other hand, its later re-use provides evidence for the same phenomenon seen in the northern and eastern sectors, namely the integration of an earlier wall in a non-visible part of the late Classical/early Hellenistic fortification. However, contrary to the other two sectors, here the rear facing of the MH wall has not been removed, since the excavation showed that its fill was not disturbed. Lastly, it is worth noting that the presence of this MH wall over the line of the historic fortification seems to confirm that the Tower Y was contemporary with the construction of the fortification wall of polygonal masonry,⁴⁸ and therefore not a later addition, as has been proposed.⁴⁹

³⁹ Philippa-Touchais & Touchais 2006, 718, fig. 18.

⁴⁰ Apart from the two sectors where the complex is attested with certainty (east and south-east), its presence is suggested at the southern sector in building *e* excavated by Vollgraff (Fig. 3: III).

⁴¹ Several architectural data suggest a second floor.

⁴² Philippa-Touchais 2010, 796.

⁴³ Touchais 1978, 799, fig. 36.

⁴⁴ On the Tower Y see Fachard 2010, 558; on the 2011 excavation season see Philippa-Touchais *et al.* 2012–13, esp. 593–604.

⁴⁵ The masonry of the wall is irregular, especially in the upper part and perhaps in the median one, suggesting some more recent modifications. However, the foundation blocks are definitely *in situ*.

⁴⁶ It is noteworthy that this wall was slightly set back (c. 20–30 cm) from the line of the fortification façade.

⁴⁷ Philippa-Touchais *et al.* 2012–13, 600; Philippa-Touchais & Touchais forthcoming; see also <http://chronique.efa.gr/index.php/fiches/voir/2635/>.

⁴⁸ Fachard 2010, 558.

⁴⁹ Vollgraff 1907, 152.



Fig. 11 Aspis, SE sector: aerial photo. In the rectangle, the rear MH wall of the hexagonal Tower Y. View from the north-east (photo: K. Xenikakis, EFA).



Fig. 12. Aspis, SE sector. MH terrace wall reused as rear wall of the Hellenistic Tower Y. View from the east (author's photo, EFA).

Course

The course of the MH enceinte raises several questions in the south-eastern sector. Here, as we saw, it was not located over the tracing of the historic fortification wall, as it was in the northern and eastern sectors. In addition, it was not found either in relation to the MH 'perimeter complex', as in the eastern sector. An intriguing point

is that here this complex no longer follows a course parallel to the historic fortification, but moves away from it (to the west). Although we expected to find the MH enceinte 2 m outside the complex, no clear traces of a stout enclosure were found in the expected position. It is worth noting, however, that a wide Hellenistic ditch excavated in this area, parallel to the 'perimeter complex'

and related by the excavator to the construction of the historic fortification,⁵⁰ could actually correspond to a trench for removing the enceinte stones; this possibility must be studied in more detail.

We can therefore suggest the following possibilities as regards the MH enceinte in the south-eastern sector: 1) the MH enceinte did exist (in connection with the 'perimeter complex') but was completely destroyed by the large-scale construction works of the later fortification wall; 2) the MH enceinte did not exist here and the defence of the settlement was ensured by the early MH strong retaining wall – identified behind the Tower Y – and the 'perimeter complex'.

Concluding remarks on the available evidence

A MH enceinte did exist around the MH settlement on the Aspis hilltop. Its presence was mainly observed in the northern sector, where the excavation uncovered a substantial and well-dated section. In the eastern sector its presence is also well-attested but the dating is not conclusive. In the south-eastern sector its very presence is problematic. The wall is built of massive unworked limestone boulders, roughly fitted together, with no use of mortar; small chunks of limestone are wedged into the interstices between the boulders. This masonry is no different to the 'Cyclopean' system of construction. Its presence here suggests that this system was in use in the Argolid as early as MH II late.

Dating

According to the evidence in the northern sector, the MH enceinte must date to a mature phase of MH II or to the beginning of MH III (and not to the final Aspis phase – MH IIIB – as we thought). In the eastern sector, some restoration works took place on the MH fortification wall (coarsely rectangular masonry) in a period still unidentified but in any case antedating the late Classical/early Hellenistic period. In all sectors, the defensive system of the hill underwent extensive repair works during the early Hellenistic period.⁵¹ During these works, some portions of the Cyclopean wall – still well

preserved – were incorporated in the new fortification without any modification, while other portions⁵² were re-used in several ways.⁵³

It has been argued, not without reason, that the 'Cyclopean' character of the enceinte suggests a date in the LH III period, and that the paucity of Mycenaean remains on the Aspis may be mainly due to erosion and later construction.⁵⁴ As we argued above, the 'Cyclopean' masonry of the wall can be traced back to the end of MH II. As to the paucity of Mycenaean remains on the Aspis, I believe that erosion processes on this low mound were not dramatic enough to explain the disappearance of Mycenaean architectural remains; in addition, later construction on the hill is not sufficiently dense for this to be seen as a possible cause of destruction of all traces of the Mycenaean occupation. If there were significant Late Helladic buildings, they should have left more traces. However, the relatively limited LH III pottery (mostly LH IIIC) found on the surface or in disturbed layers of the site clearly indicates some activity on the hill during this period.⁵⁵ Therefore we cannot exclude that the enceinte was re-used during the LH IIIB and most likely during LH IIIC.

Course and significance

According to Vollgraff, the outer MH enceinte followed the same tracing as the historic fortification, since the latter was built on the remains of the former. Indeed the evidence in the northern and eastern sectors confirmed this view, though in the south-eastern sector the tracing of the MH enceinte could be different (see above). In any case, the circular course of the outer enceinte and the series of concentric structures ('perimeter complex' and possibly two inner circuit walls⁵⁶) point out the focused organization of the settlement.

At Malthi (Messenia), a similar example of fortified settlement organized in a series of concentric rings, according to a centripetal settlement planning, was proposed to reflect spatial hierarchy and the inception of differentiation within the community.⁵⁷ 'Centredness is a general concept to describe the centripetal organization

⁵⁰ Touchais 1978, 801–2 and fig. 36.

⁵¹ Touchais 1978, 801–2; Piérart & Touchais 1996, 63; Fachard 2010, 557–60.

⁵² In some cases already modified at a previous period, like the blocks in roughly rectangular masonry of the eastern sector.

⁵³ Fachard (2010, 560) thinks that he distinguished several Cyclopean boulders partially recut when re-used in the polygonal fortification.

⁵⁴ Hope-Simpson & Hagel 2006, 39; Hope-Simpson & Dickinson 1979, 43–5.

⁵⁵ Touchais 2013.

⁵⁶ The 'inner enceinte', although out of function in MH III, was certainly still visible since according to Vollgraff's plan (Fig. 2) it was only partly overbuilt by a Hellenistic structure.

⁵⁷ Wright 1994, 45–6; on the centripetal organizing principle see also Maran 2006, 78.

of Mycenaean society, an organizing principle common in many societies, especially complex ones.⁵⁸ Characteristic spatial components of this principle appear in the MBA and carry over into a more fully developed LBA. It appears, therefore, that during the second half of the MH period the Aspis – just as Malthi – has all the characteristics of a community in transformation.

The socio-political and ideological context: establishment and abandonment of the MH fortified acropolis

I shall now discuss, very briefly, the socio-political and ideological context of three pivotal moments in the life of the MH fortification:

1. The establishment and affirmation of the fortified acropolis, in an advanced stage of the MH period (MH II late–III, c. 1800–1700 BC)
2. The abandonment of the citadel, by the beginning of the Mycenaean period (during LH I, c. 1600 BC), and
3. Its fall to ruin, during almost the entire Mycenaean era (c. 1600–1200 BC), and re-use in historical times.

ESTABLISHMENT AND AFFIRMATION: MH II LATE–III

It has already been proposed that the Aspis' re-arrangement on the model of a fortified acropolis seems to suggest: (1) a population rise, (2) the emergence of social differentiation – reflected mainly in the nuclear organization of the habitation area and the territorial demarcation of the settlement, (3) some sort of administrative organization – reflected by the implementation of large-scale communal works, and (4) in the field of inter-communal relations, increasing tension and competition among communities of the Argive plain.⁵⁹ Our view is that the transformation of the Aspis into a settlement of defensive character was due precisely to this prevailing competitive atmosphere, possibly associated with the rising power of Mycenae.⁶⁰

Besides socio-political connotations, the defensive layout of the Aspis and the work involved in erecting monumental structures (fortification, 'perimeter complex') may also imply symbolic meaning. It has been argued that the conspicuous consumption of energy in the form of monumental construction is a basic way to symbolize and reinforce power.⁶¹ More recently attention was drawn on viewing monumentality in terms of social identity and social memory. Monumental buildings are considered culturally constructed places and enduring features of the landscape that actively express ideology, elicit memory and help to constitute identity.⁶² 'The time and energy invested in monumentality reflect the crucial importance to elites of establishing a corporate identity and perpetuating the group's social memory'.⁶³ It has also been argued that the monuments re-inscribed basic social distinctions with new and powerful cultural metaphors, and that social differentiation was displayed by staging practices which required increasingly elaborate architectural settings to render them effective.⁶⁴ Thus elaborate architectural settings could have been used in past societies to reinforce ideology and cultural values.

So, through monumentality, the community living on the Aspis was probably seeking to maximize social status and position, to affirm identity and to defend or re-evaluate its ideology, culture and traditional values (possibly against external challenges). As I mentioned at the beginning, we believe that the social groups who were trying to emphasize their identity through fortified arrangements and by claiming symbolic ties with the ancestral land might belong to the old MH elite, and certainly not to new 'Mycenaeanizing' elite groups, who do not make their presence obvious in Argos before the beginning of LH II.

ABANDONMENT: EARLY MYCENAEAN PERIOD (LH I)

At an early stage of the Late Bronze Age, the settlement on the Aspis hilltop was abandoned, and habitation was concentrated exclusively on the east/south-east foot of the hill, an area already inhabited since at least MH III.⁶⁵

⁵⁸ Wright 1994, 49–50.

⁵⁹ Papadimitriou *et al.* 2015, 177.

⁶⁰ Philippa-Touchais & Touchais 2008a, 193; Philippa-Touchais 2010, 796.

⁶¹ Trigger 1990, 128.

⁶² Knapp 2009, 47.

⁶³ Knapp 2009, 55.

⁶⁴ Barrett 1990, 183.

⁶⁵ It is worth noting that before the concentration of population in the Aspis area (top and east/south-east foothills) around the beginning of MH III, habitation was quite dispersed: MH I–II architectural vestiges were excavated at the 'Quartier Sud' and the Deiras, while MH II pottery found on the Larissa hill might suggest a kind of permanent installation on this hilltop as well. Concerning the acropolis of Larissa, no other evidence is known before the palatial period: a circular enceinte and some more vestiges suggest the presence of a small fortress at an advanced stage of LH IIIB, Papadimitriou *et al.* 2015, 162–6.

Although there is no evidence of violent destruction, it has been assumed that the abandonment of a site with such a dominant position and symbolic connotation could not have been deliberate but rather was forced, possibly by new social, political or economic conditions at a regional level. Economic or environmental changes on a broader, inter-regional scale are also possible.⁶⁶

Whatever the reasons for the abandonment of the citadel, the results were decisive for the history of the site since they involved major social changes. The old, MH elite not only lost control over a strategic and symbolic position but probably also lost its initiative in making advances on a political and social level. The descent from the Aspis hill and the shift in habitation seems to be the first of a series of actions, inscribed in the social landscape, that indicate the rise of new social groups with different aspirations. After its abandonment the Aspis is no longer systematically inhabited during the Bronze Age. I see here a conscious refusal to inhabit a focal reference point of the MH social landscape. This action might have been conducted by members of a new elite who, by so doing, expressed their opposition to an ideology they considered no longer functioning.

Moreover, a little later, a similar shift occurred in the funerary field by the transfer of the cemetery to a new burial place. Indeed, at the beginning of LH II, the old MH/LH I cemetery located at the east/south-east foothills of the Aspis was abandoned and a new burial ground – accompanied by new burial practices – was inaugurated at the Deiras ravine.⁶⁷ Both shifts may convey a common desire to break away from tradition and establish a new social and cultural landscape.

The 'afterlife' of the monument: fall to ruin and re-use

Bradley's concept of the 'afterlife of monuments' refers to the way people interact with monuments that have fallen out of active use.⁶⁸ It seems that monuments from the past had an influence over the development of their surrounding landscape and provided a focus

of continuing attraction for later communities and the construction of new monuments. Of course, this can also work in the opposite manner: monuments or places could also be *avoided* by later communities.⁶⁹

THE FALL TO RUIN: MYCENAEAN PERIOD

In the LBA, this well-located and previously powerful place remained practically uninhabited for most of the period. In the new ranking order of settlements in the Argive plain, Argos, despite its glorious past, never became a 'first-class' palatial centre with a proper acropolis.

It has been argued that places marked by individual buildings and other discrete architectural features acquire histories as they are built, occupied, maintained, modified, partly or wholly dismantled, or allowed to fall to ruin.⁷⁰ I would argue that the fall to ruin of the Aspis fortified settlement during the Mycenaean period was not a random act but rather the result of a deliberate political and symbolic decision, presumably by the new leadership established in Argos at the beginning of the LBA. This decision was apparently connected with a wider shift in power and identity.⁷¹ If the act of rebuilding on the same place reflects a decision to reproduce social, political and moral order,⁷² the act of letting a place fall to ruin may reflect the opposite intention: that is to deconstruct order, disrupt social memory and renegotiate social values and control. Perhaps a prerequisite for the establishment and successful operation of the new social order was precisely this deconstruction of and breaking away from the old tradition and the old social power.

THE RE-USE: FROM THE GEOMETRIC TO THE HELLENISTIC PERIOD

The Geometric pottery found on the hill is rare and does not suggest intense activity. However, evidence from the Late Geometric (second half of 8th century), Early Archaic (7th–6th centuries) and Early Classical period (5th century) confirms the presence of a sanctuary on top of the hill.⁷³ Indeed, a rich votive material (8th–5th centuries) was uncovered dispersed in all excavated sectors, including miniature vases, human and zoomorphic clay figurines, various clay models, and

⁶⁶ Papadimitriou *et al.* 2015, 177–8.

⁶⁷ Philippa-Touchais *et al.* 2015, espec. 463–4; Papadimitriou *et al.* 2015, 178.

⁶⁸ Bradley 1993.

⁶⁹ Field 2001.

⁷⁰ Ashmore 2002, 1178.

⁷¹ Voutsaki 2005, 137.

⁷² See note 70 above.

⁷³ Philippa-Touchais & Touchais in press.

metallic objects, as well as several architectural elements, mainly clay painted simas (6th–5th centuries). Although no building ruins have been located with certainty, the presence of this sanctuary on the Aspis suggests some architectural activity. It is therefore possible that the fortification wall was consolidated or repaired during the early Archaic period (or even earlier), in order to be used for the purposes of the sanctuary.⁷⁴ The restoration works mentioned above in the eastern sector (coarse rectangular masonry⁷⁵), antedating the Late Classical/Early Hellenistic period, might date back to this period.

It is of particular interest that an early votive deposit (8th century) was located just in front of the surviving MH Cyclopean fortification wall of the north sector (under the ramp leading to the interior of the Hellenistic salient).⁷⁶ Similar signs of early cult in connection with Cyclopean masonry structures – or more generally with imposing Bronze Age ruins – are known from other sites as well (the sanctuary of Poseidon at Isthmia,⁷⁷ the temple of Athena on the Athenian Acropolis,⁷⁸ the Agamemnoneion at Mycenae⁷⁹). They are interpreted as ancestor cults, namely as claims to kinship links with glorious ancestors or epic heroes. In any case, this early sanctuary on the Aspis – as the contemporaneous sanctuaries on the Larissa hill – was probably linked to the political and territorial consolidation of the nascent *polis* of Argos.⁸⁰

By the end of the 4th century, architectural activity again becomes very intense on the hill: many buildings are constructed on the MH foundations, some of them re-using earlier domestic walls. As we already mentioned, the MH fortification wall was largely re-used during this reoccupation of the hill. According to Fachard, this valorization of the defensive system suggests that the hill was expected to play a new role in the larger defensive strategy of the city in the early Hellenistic period.⁸¹

The re-use of Aspis' MH fortification remains in historic times was certainly not exclusively done for practical reasons (since it provided appropriate raw material). It was also an act imbued with symbolic meaning: the old

vestiges were incorporated into newer structures as they most probably provided a source of social power. It has been suggested that elites of the late historic periods invoked an apparently timeless authority by associating themselves spatially with the ruins and thereby claiming ties with primordial, ancestral or mythical antecedents.⁸² Thus, it can be argued that the continuing attraction of the MH monuments was also due to the ways in which they were embedded within cultural memory and were still considered powerful places.

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⁷⁴ According to Loader (1998, 35) some sections of polygonal stonework on the Aspis may date to the Geometric period. However this suggestion does not seem very clear and well documented (see Hope Simpson & Hagel 2006, 138).

⁷⁵ Somehow similar to the 'pseudo-Cyclopean' terrace built for the earliest temple at the Heraion of Argos, see Wright 1982; Antonaccio 1992; Whitley 2001, 151.

⁷⁶ Touchais 1980, 698 and figs 10, 12.

⁷⁷ Gebhard 1993, 156–9.

⁷⁸ Whitley 1991, 61.

⁷⁹ Cook 1953; Klein 1997.

⁸⁰ Foley 1988, 140; Polignac 1995, 22; Alexandridou & Philippa-Touchais forthcoming.

⁸¹ Fachard unpublished report 2012 to INSTAP.

⁸² Ashmore 2007, 262; Bradley 1987.

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DIE ARCHAISCHE STADTMAUER VON KORINTH

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Zusammenfassung

Das große öffentliche Projekt zur Erweiterung der Autobahn von Korinth nach Patras hat neue wichtige Ergebnisse durch Notgrabungen erbracht. Die meisten Grabungsschnitte wurden nördlich der Autobahn geöffnet, am Nordhang des Plateaus, bis zu welchem sich die klassische und römische Stadt von Korinth ausdehnte. Genau dort, wo die Hochebenen der nördlichen, bergnahen Gebiete von Akrokorinth in die fruchtbare Tiefebene übergehen, wurden Mauerabschnitte entdeckt, die aufgrund ihres Fundortes zu der nach Norden ausgedehnten Befestigung des korinthischen Stadtstaates gehören müssen. Der Mauerverlauf folgt den natürlichen Gegebenheiten der nördlich der antiken Stadt liegenden Abhänge, anhand von Keramik aus dem Fundamentgraben ist der östlichste Teil der Mauer in das 6. Jh. v. Chr. zu datieren. Dieser Befund ist von größter Bedeutung für unser Verständnis von Befestigung und Topographie des frühen Korinth.

Die zuständigen Behörden für Archäologie führen seit 2008 im Rahmen des großen öffentlichen Projekts zur Erweiterung der Autobahn von Korinth nach Patras Notgrabungen durch (Abb. 1). Sie erbrachten wichtige neue Ergebnisse, die unsere Kenntnis der Geschichte des antiken Korinths fördern.

Die meisten Grabungsschnitte wurden nördlich der Autobahn geöffnet, und zwar am Nordhang des Plateaus, bis zu dem sich die klassische und römische Stadt von Korinth ausdehnte. Genau dort gehen die Hochebenen der nördlichen, bergnahen Gebiete von Akrokorinth in die fruchtbare Tiefebene über, die am Golf von Korinth und dem Hafen von Lechaion endet. Die neu entdeckten Befunde stammen nahezu aus der ganzen Antike, von dem späten Mittelhelladikum (17. Jh. v. Chr.) bis in die spätrömische Zeit (4. Jh. n. Chr.). Unter ihnen sind auch Mauerabschnitte, die aufgrund ihres Fundortes zu der ausgedehnten Befestigung im Norden des korinthischen Stadt-Staates gehören.

Bis zur Entdeckung dieser neuen Befestigungsabschnitte wurden bereits andere Teile der antiken Mauer an verschiedenen Orten des antiken Korinth untersucht, hauptsächlich von der Amerikanischen Schule (Abb. 2). Die Grabungsergebnisse dienten mehr oder weniger der Interpretation einer Umfassungsmauer, die in die spätklassisch-hellenistische Zeit (4.–3. Jh. v. Chr.) zu datieren ist. Die Notgrabungen, die in den letzten Jahren innerhalb des antiken Korinth von der zuständigen Ephorie durchgeführt wurden, bestätigen die Ergebnisse der US-amerikanischen Forschungen zu dem Verlauf und der Architektur der Mauer des spätklassisch-hellenistischen Korinth.

Die Ausgrabungen der Amerikanischen Schule in den Jahren 1920–1930 brachten im Töpferbezirk (dem sog. Potter's Quarter), im Westen der antiken Stadt, Teile einer antiken Mauer ans Licht.¹ Dieser Abschnitt liegt ca. 1400 m westlich des Apollon-Tempels im Zentrum der archäologischen Stätte. Die in Nord-Süd-Richtung

¹ Stillwell 1948, 14–5 Abb. 14–15; Frederiksen 2011, 134–5 Abb. 2D; 3A.



Abb. 1 Korinth. Luftaufnahme der archaischen Stadtmauer, Ansicht von Nordosten (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).



Abb. 2 Korinth. Verlauf der Befestigungen der antiken Polis, nach den Ergebnissen der Amerikanischen Schule für Klassische Studien, Athen (Foto-Archiv der Amerikanischen Schule für Klassische Studien (ASCS, Athen)).

verlaufende Mauer wurde in einer Länge von 70,00 m aufgedeckt. Es handelt sich um eine zweischalige, 2,40 m starke Mauer, deren ca. 0,30 m dicke Schalen aus regelmäßigen, in Mörtel versetzten Steinen bestehen. Die Füllung besteht aus unregelmäßigen Steinen und Erde. Quer zu den Schalen und in regelmäßigen Abständen von ca. 5,00 m verlaufen Verstrebungsmauern. Es ist nicht sicher, ob dieser Mauerabschnitt, der in die erste Hälfte des 7. Jh. v. Chr. datiert wird, zur Befestigung der antiken Stadt oder einem bestimmten Bezirk der Stadt gehörte.²

In der gleichen Position, sehr nah östlich der früharchaischen Mauer, wurde eine starke Mauer freigelegt, die im orthogonalen/regelmäßigen isodomen System gebaut ist und in die Spätklassik oder den Frühhellenismus zu datieren ist. An vielen Stellen in der Umgebung von Korinth sind Abschnitte dieser starken Umfassungsmauer zu sehen – mehrere davon

wurden auch aufgedeckt – und sie weisen die gleichen Eigenschaften auf.

Es handelt sich um eine zweischalige Mauer, die aus einer Außen- und einer Innenschale besteht und im orthogonalen isodomen System mit gleichhohen Lagen von ca. 0,50 m gebaut ist. Die Steinblöcke sind wechselnd als Binder- und Läuferlagen gelegt. Die Breite der Binder beträgt die Hälfte der Läuferblöcke, weswegen die Fugen ganz dicht sind. Die Mauerstärke schwankt zwischen 3,20 m und 5,60 m. Alle 60,00 m besitzt sie halbkreisförmige Wehrtürme, die einen Durchmesser von 8,00 m haben und von der Außenschale um 4,00 m vorspringen. Starke rechteckige Türme liegen in der Nähe der Tore.

Diese Mauer ist an den Hängen der Hochebenen, die die Stadt nördlich, westlich und östlich umgeben,

² Vgl. Frederiksen 2014.

fundamentiert, während sie sich im Süden an die Befestigung von Akrokorinth anschließt. Die Stadtmauer ist durch die sog. Langen Mauern mit dem Hafen von Lechaion im Norden der Stadt verbunden. Die US-amerikanischen Ausgrabungen haben die Verbindung der östlichen Mauer der Langen Mauern mit dem Hauptverlauf der Stadtmauer aufgedeckt.³ Die griechischen Notgrabungen im Rahmen des Projekts zur Erweiterung der Eisenbahnlinie Korinth-Kiato haben in den Jahren 2002–2005 eine starke Verteidigungsstruktur ans Licht gebracht, die als Teil der westlichen Mauer der Langen Mauern interpretiert wird. Jede Schale besteht aus zwei parallelen Wänden, die voneinander einen Abstand von 1,55 m aufweisen. Sie sind mit Kalksteinblöcken gebaut, die an den sichtbaren Seiten sorgfältig behauen sind. Die Füllung zwischen den beiden Wänden besteht aus Erde und unbearbeiteten Steinen, während sich die zwei Mauerwände ab und zu mit Kastenmauern verbinden, die ihrer Stabilität und Verstärkung dienen. Die Mauer ist drei Schichten hoch erhalten, in einer Gesamthöhe von 1,50 m. Ihre Breite beträgt 2,90 m. Die Langen Mauern befestigten einen Bereich von 1200 m Breite und 2000 m Länge in der Nord-Süd-Achse, über den der nördliche Teil der Umfassungsmauer der Stadt mit der Befestigung von Lechaion verbunden war, so dass der Zugang vom Hafen in die Stadt und umgekehrt gesichert war. Der Mangel an gesicherten Daten über die spätarchaische und klassische Stadtmauer war besonders bedauerlich, da die enorme Bedeutung von Korinth in der Literatur, Architektur, der bildenden Kunst etc. und seine Teilnahme an diversen Kriegen (Perserkriege, Peloponnesischer und Korinthischer Krieg) bekannt ist. Dieser mächtige Stadt-Staat konnte in archaischer und klassischer Zeit nicht unbefestigt gewesen sein.

Diese Kenntnislücke kann jetzt durch die Ergebnisse aus den jüngsten Ausgrabungen gefüllt werden, bei denen Teile der antiken Mauer freigelegt wurden. Diese Abschnitte liegen 740 m nordwestlich des Apollon-Tempels, 250 m nordwestlich des Asklepieions und 560 m südwestlich des kürzlich bei den Ausgrabungen, die im Rahmen des großen öffentlichen Projekts zur Erweiterung der Eisenbahnlinie von Korinth nach Patras durchgeführt wurden, aufgedeckten Teils der Langen Mauern.

Das älteste Befestigungswerk, das während der Notgrabungen entlang der Autobahn Korinth-Patras ans Licht kam, stammt aus dem späten 8. bis frühen 7. Jh. v. Chr., wie die Keramikfunde zeigen. Es ist



Abb. 3 Korinth. Fundament der Innenschale der früharchaischen Stadtmauer, Ansicht von Südwesten (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).

mit dem im Potter's Quarter im Westen der antiken Stadt aufgedeckten Mauerabschnitt bautechnisch gleich. Es handelt sich um Reste der Fundamentierung der Innenschale der antiken Stadtmauer, die aus regelmäßigen, in Mörtel versetzten Steinen besteht. Die in Ost-West-Richtung verlaufende Mauer, deren Errichtung Teile einer mykenischen Werkstatt zur Tongewinnung und -Verarbeitung aus dem 13. Jh. v. Chr. zerstörte, wurde in einer Länge von 18 m aufgedeckt (Abb. 3). Die Dicke ihrer erhaltenen Innenschale beträgt 0,40 m. Die erhaltene Höhe misst 0,25 m. Die quer zu den Schalen in regelmäßigen Abständen von ca. 3,50 m verlaufenden Verstrebungsmauern haben ungefähr die gleiche Stärke und Bauweise und deuten darauf hin, dass die früharchaische Stadtmauer zweischalig war. Ihre Außenschale wurde bei der Errichtung der archaischen Stadtmauer zerstört, die nördlich im Abstand von ca. 1 m von der Innenschale der früharchaischen Mauer gebaut wurde.

Das imposante Befestigungswerk, eine Steinkonstruktion archaischer Zeit, wurde in einer Länge von 135 m untersucht (Abb. 4); sie verläuft ebenfalls in Ost-West-Richtung und ist auf einer Höhe von 0,80 bis 3,60 m erhalten.

Sowohl aufgrund ihrer Bautechnik als auch zugunsten einer durch die Gliederung besser zugänglichen Beschreibung wird die Mauer im Folgenden in vier Abschnitten (A–D) von Ost nach West vorgestellt, in der gleichen Folge, wie sie auch ausgegraben wurde.

³ Carpenter u. a. 1936, 86–94 Abb. 87–90.



Abb. 4 Korinth. Die archaische Stadtmauer, Ansicht von Norden (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).

Abschnitt A

Als *Abschnitt A* wird der östlichste Teil der Mauer bezeichnet, von dem nur die Steinfundamentierung auf dem harten Sandsteinfelsen des Gebiets erhalten ist. In seinem vorderen, nördlichen Teil sind die in unterschiedlichen Größen grob bearbeiteten Steinblöcke der Fundamentschar im unregelmäßigen isodomen System gelegt (Abb. 5). Die Steine der Außenseite sitzen direkt auf dem unebenen natürlichen Felsen, während kleinere mit Mörtel zusammengebundene Steine (als ‚Zwickelsteine‘) als Füllung der entstandenen Lücken eingesetzt sind. An jenen Stellen wurde der natürliche Fels zur Stabilisierung der Mauer abgearbeitet. Hinter (südlich) der Außenschale ist ein Fundamentgraben mit einer Breite von 0,35 m und einer Tiefe von

0,40 m festzustellen, der mit in Mörtel versetzten unregelmäßigen kleinen Steinen gefüllt wurde.

Der erhaltene Teil der Mauer besitzt eine Maximalbreite von 0,90 m und eine größte erhaltene Höhe von 0,80 m. Er verläuft in Südost-Nordwest-Richtung und ist 12,50 m lang. Im Osten läuft er unter die Autobahntrasse, während er im Westen in der Mündung eines Steinkanals endet. Höchstwahrscheinlich besaß der Mauerabschnitt hier keine besondere Höhe (max. 1,00 m), da der natürliche Fels nördlich von seiner Fundamentierung in großer Tiefe (ca. 2,50 m) eingearbeitet ist. Auf diese Weise bildet sich im Norden ein vertiefter Bereich (Vorgraben), der durch den Steinbruch besonders unwegsam ist. Hier wurde der Angreifer sowohl mit der unebenen Fläche als auch mit einem 2,50 m hohen, senkrecht gearbeiteten Felsen konfrontiert, der zusätzlich noch durch einen 1,00 m hohen, gebauten Teil erhöht war. Anhand von Keramik aus dem Fundamentgraben ist der östlichste Teil der Mauer (Abschnitt A) in das dritte Viertel des 6. Jh. v. Chr. zu datieren.

An seiner westlichen Ecke endet der beschriebene Mauerabschnitt in der Mündung eines gedeckten und aus normalen Steinblöcken gebauten Steinkanals, der eine Gesamtbreite von 2,00 m besitzt. Der Kanal verläuft in Nord-Süd-Richtung und wurde auf einer Länge von 7,50 m untersucht, da sein südlicher Teil unter der alten Autobahntrasse weiterläuft. Seine Seitenwände bestehen aus aufrecht stehenden Steinblöcken mit einer Größe von 1,15 m × 0,75 m × 0,45 m, wobei die dazwischenliegenden Lücken mit Mauerzügen gefüllt wurden, die mit kleineren in Mörtel versetzten Steinen von 1,10 m × 0,45 m × 0,45 m gebaut sind. Der Kanal war z. T. unterirdisch und im sterilen Boden senkrecht gemeißelt. Sichtbar waren die



Abb. 5 Korinth. Abschnitte A und B der archaischen Stadtmauer, Ansicht von Norden (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).

Aufsicht der Seitenwände und die Steine der Deckung mit einer Größe von 1,03 m × 0,73 m × 0,45 m. Der Abwasserkanal besitzt eine Innenhöhe von 1,20 m und eine Breite von 0,50 m. Die Steine der Deckung sind nicht in der ganzen Breite der Konstruktion zu finden, sondern nur beim leeren Bereich zwischen den Seitenwänden, wo sie nur wenig breiter als der Kanal sind. Sowohl die Salzkonzentration am Boden und am untersten Teil der Innenseitenwände als auch die Verstärkung seiner Seiten von außen durch eine dicke, wasserdichte Schicht von zusammengebundenen Steinsplittern mit einer Stärke von 0,30 m weisen darauf hin, dass diese Konstruktion einer Gewässerleitung diene. Offensichtlich handelt es sich um einen späteren Anbau an die Mauer des späten 5. Jh. v. Chr., um Wasser abzuleiten, das mit einiger Strömung vom südlich der Mauer liegenden Hügelhang herunterfloss.

Abschnitt B

Die Mündung des Kanals besteht östlich aus einem senkrechten, als Orthostat fungierenden Steinblock mit einer Größe von 1,20 m × 0,75 m × 0,40 m und westlich aus dem Anfang eines Mauerteils (Abschnitt B) mit eigentümlicher Konstruktion in einer Länge von 7,00 m.

Dieser Abschnitt besteht aus senkrecht gelegten Steinblöcken, von denen ein Teil direkt auf dem Felsen aufsitzt. Sie sind sorgfältig bearbeitet und weisen einen Abstand von 0,30–0,70 m auf. Über diesen senkrechten Steinblöcken liegt eine Reihe von isodom gelegten Steinen, die an ihrer Rückseite konkav gearbeitet sind. Nur drei dieser Steine sind in situ erhalten. Obwohl die Steine z. T. in einer Abmessung von 0,30 m × 0,60 m frei gelassen sind und so den Schießscharten der späteren Befestigungen ähneln, dienten sie trotzdem der Wasserableitung. Das Wasser floss wegen des geneigten Bodens mit Schwung von Süden und sammelte sich an diesem trapezförmig herausgebildeten Bereich an, der möglicherweise als eine Art Befestigung fungierte.

Die großen Steine des Mauerabschnittes B sind mit einer Mischung kleinerer Steine und Mörtel zusammengebunden. Die gleiche Mischung wurde auch für die Stützung der hinteren Ansicht der untersten Blockreihe verwendet. Es ist erwähnenswert, dass die Mauer an dieser Stelle in einem Abstand von 0,80 m südlich des natürlichen Felsen fundamentierte ist, der hier wieder nördlich in großer Tiefe (ca. 2,30 m) eingemeißelt ist. So bildet sich entlang der Maueraußenseite ein

schmäler Weg mit einer Länge von 8,50 m und einer Breite von 0,80 m heraus. Genau wie beim Abschnitt A ist der gebaute Teil der Mauer hier nur eine Erhöhung, während die eigentliche Verteidigungsrolle dem kompakten, senkrecht und tief geschnittenen Felsen überlassen blieb. Dessen Ansichtsseite ist sorgfältig geglättet. Der gebaute Teil der Mauer hat eine Maximalstärke von 0,75 m und eine Höhe von 1,30 m. Die Gesamthöhe der Mauer, zusammen mit dem gemeißelten Felsen, reicht bis zu 3,60 m.

Der Abschnitt B wird anhand der gesammelten Keramik in das letzte Viertel des 5. Jh. v. Chr. datiert.

Abschnitt C

Am westlichen Ende von Abschnitt B weicht die Richtung der Mauer auf einer Länge von 8,00 m nach Süden ab und läuft dann wieder weiter nach Westen, wobei sie einen fast rechten Winkel bildet (Abb. 6). Sowohl das regelmäßige isodome Mauerwerk des Abschnittes in Nord-Süd-Richtung als auch das besonders sorgfältige Mauerwerk der ersten 6,00 m im Verlauf nach Westen unterscheiden diesen Mauerabschnitt von jedem anderen Teil des Monuments. Deswegen wird er als Abschnitt C bezeichnet und getrennt untersucht.

An dieser Mauerecke wurde, nach Aufgabe der Mauer, ein hellenistisches Gebäude aus dem 2. Jh. v. Chr. errichtet, dessen Funktion rätselhaft bleibt, obwohl eine Kultstätte nicht auszuschließen ist. Auch hier ist in großer Tiefe eine Bearbeitung des Felsens vor der Errichtung des hellenistischen Gebäudes zu finden, da dieses auf 0,70 m hohen Erdzusätzen aufsitzt, die auf dem bearbeiteten Felsen angesammelt sind.

Entlang der ganzen Länge von Abschnitt C (15,00 m) und direkt nördlich der Fundamentierung der Mauer liegt eine in den Felsen gemeißelte Rinne mit einer Breite von 0,30 m und einer Tiefe von 0,40 m. Ihr Boden ist in dem Nord-Süd verlaufenden Abschnitt in nördlicher Richtung geneigt. Am Anfang des Abschnitts C ist er dagegen nach Westen geneigt, wobei sich der höchste Punkt an der Verbindung der zwei Rinnen, genau an der Ecke, befindet. Die Rinne verweist auf die Intention, das Wasser von diesem Ort abzuleiten, um ihn begehbar und frei von stehendem Wasser zu halten. Auf den ersten 3,80 m des Bereichs in Ost-West-Richtung ist die Rinne von den Steinblöcken der Fundamentreihe überdeckt, diese Abdeckung gehört jedoch zu der Nutzungsphase des



Abb. 6 Korinth. Abschnitt C der archaischen Stadtmauer mit hellenistischem Gebäude und sog. heiliger Nische, Ansicht von Norden (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).

hellenistischen Gebäudes, als die Rinne keine Funktion mehr hatte.

Abschnitt C ist mit Ausnahme der archaischen eingemeißelten Rinne, zusammen mit dem bedachten Kanal an der Verbindung der Abschnitte A und B, in eine spätere Zeit als die ursprüngliche Konstruktion zu datieren, wahrscheinlich in das späte 4. Jh. v. Chr. Diese Schlussfolgerung resultiert, außer aus der Keramik, sowohl aus dem Unterschied in der Bautechnik (regelmäßiges isodomes Bausystem) als auch aus dem Gebrauch von sorgfältiger bearbeiteten Steinen, die denen späterer Befestigungen ähnlich sind, wie z. B. denen der Langen Mauern oder des spätklassischen Teils, der in einer Entfernung von ca. 1000 m weiter westlich in der Gegend von Kokkinovrysi freigelegt wurde.

Abschnitt D

Westlich von den in späterer Zeit angebauten Abschnitten B und C liegt die Fortsetzung der Mauer, die hier eine andere Form hat. Trotz der gelegentlich auftretenden

Unterschiede wird dieser Teil als Einheit betrachtet und als Abschnitt D untersucht, da er eine gerade Linie auf eine Länge von ca. 105 m in Ost-West-Richtung bildet.

6,50 m westlich des rechten Winkels, den der Abschnitt C formt, bildet sich eine rechtwinklige Nische heraus. Die Nische ist 3,55 m (Länge) × 1,70 m (Breite) × 1,20 m (Höhe) groß. Funde im Inneren der Nische, wie die Büste einer Frauenstatuette, starke Brandspuren im östlichen Bereich, ein vorspringender Steinblock an der südwestlichen Ecke und der Teil eines gepflasterten Bodens aus korinthischen Stroteren, verstärken die Interpretation als eine Kultstätte. Diese Nische liegt außerdem sehr nah an zwei sog. heiligen Orten, dem archaischen (6. Jh. v. Chr.) ‚Altar der Zwillingschlangen‘ und dem geometrischen (9.–8. Jh. v. Chr.) ‚ovalförmigen‘ Gebäude, das auch eine Kultstätte ist. Beide befinden sich direkt südlich und an der Mauer. Deswegen wurde diese besondere Konstruktion an der Mauer als „heilige Nische“ benannt. Die Nische ist seit der Mauererrichtung in Gebrauch und Teil ihres ursprünglichen Entwurfes. Die Form ihres Inneren und ihre Funktion reichen bis in den Hellenismus zurück, d. h. in die Zeit des eckigen Gebäudes aus dem 2. Jh. v. Chr.

Nach der heiligen Nische sitzt der gebaute Teil der Mauer über eine Länge von 12,50 m weiter auf dem senkrecht gemeißelten Felsen auf und hat die Form eines Bollwerks, genau wie bei den Abschnitten A, B und C, doch in einem besseren Erhaltungszustand. Er ist noch drei Lagen hoch über seinem Fundamentniveau auf dem Felsen erhalten. An seiner Rückseite liegt eine Füllung von Steinen, die mit 0,35 m dickem Mörtel zusammengebunden sind. Die Füllung reicht bis zur Mitte der darüber liegenden Lage. Sie ist mit einer Schicht von starkem Mörtel befestigt, die an diesem Punkt eine Breite von 0,60 m hat. Da die Oberfläche dieser Schicht sehr eben ist, könnte sie auch als Wehrgang hinter den Bollwerken fungiert haben. Eine Steinkastenmauer mit einer Länge von 1,20 m und einer Breite von 0,35 m verbindet die Rückseite der Steinblöcke mit dem festen Boden im Süden und verstärkt dadurch die Stabilität des gemauerten Teils. Die größte erhaltene Höhe (Teil des Felsens und gemauerter Bereich) der Befestigung beträgt hier 2,70 m. In einer zweiten Phase wurde die Mauer durch eine zusätzliche Schicht verstärkt, was an den mit Mörtel verbundenen Steinen festzustellen ist, die auf der älteren Füllung der Mauer liegen. Diese obere Füllung besteht aus einem Mörtel von unterschiedlicher Zusammensetzung und Farbe und weist größere Steine und Scherben auf, die an das Ende des 6. Jh. oder in die ersten Jahre des 5. Jh. v. Chr. zu datieren sind.

Am westlichen Ende ist ein Teil der Mauer nach Norden, wahrscheinlich wegen des Drucks von dem von Süden kommenden Strom, eingestürzt, und zwar als die Mauer nicht mehr in Gebrauch war, da der nördlich liegende,

absichtlich gemeißelte und vertiefte Bereich in großer Höhe zugesetzt war.

Direkt westlich des eingestürzten Teils ist die Mauer vollständig vom Fundament bis zur höchsten Lage aus Stein gebaut. Das ist auf das harte Felsgestein zurückzuführen, das sich kontinuierlich nach Westen vertieft. Die nach Westen laufende Fortsetzung der Mauer ist durch den als Steinbettung in einem Streifen geglätteten natürlichen Felsen auf einer Länge von 5,00 m und einer Breite von 0,80 m nachgewiesen. Die Mauersteine fehlen komplett von diesem Punkt an, sie wurden in späteren Jahren entfernt (Abb. 7).

Zunächst ist hier eine Poterne der Mauer mit einer Breite von 1,50 m zu finden. Die Poterne wurde an der Stelle eines älteren künstlichen Wasserkanals aus der geometrischen oder der früharchaischen Zeit gebaut, der eine Breite von 4,00 m besaß. Der Wasserkanal blieb in der Nähe der Poterne erwartungsgemäß nicht in seiner ganzen Breite erhalten. Durch zwei Stützmauern im Inneren des Wasserkanals und an seiner westlichen Wand wurde ein 4,00 m × 2,00 m großer Bereich mit Erde planiert. Auf diese Weise ist eine Art Mündung im Inneren der Poterne herausgebildet, die die Anzahl der eintretenden Angreifer beschränkt, falls die Tür aufgebrochen werden konnte. Da der Mauerabschnitt an dieser Stelle eingestürzt ist, sind die Torpfosten oder andere Bestandteile nicht erhalten, mit Ausnahme eines Pfeilers aus dem östlichen Bereich, der ein Loch für den Sicherheitsbalken aufweist. Hinzu kommt ein rundes



Abb. 7 Korinth. Poterne im Abschnitt D der archaischen Stadtmauer, Ansicht von Norden (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΛΖ' ΕΠΚΑ, Korinth).

Loch mit einem Durchmesser von 0,22 m und einer Tiefe von ca. 0,10 m, das höchstwahrscheinlich als Spur einer Schwelle der hölzernen Tür zu interpretieren ist.

Westlich der Poterne befindet sich ein in gutem Zustand und bis zu fünf Schichten hoch (2,30 m) erhaltener Mauerteil. Die Fundamentschar sitzt auf dem bearbeiteten harten Sandstein.

An der Stelle, an der die Mauer eingestürzt ist, kann die Konstruktion im Querschnitt betrachtet werden. Das Profil besteht aus gut bearbeiteten Steinblöcken, die entweder in Läufer- oder Binderreihen im unregelmäßigen isodomen System gelegt sind. Die Reihenhöhe schwankt zwischen 0,35–0,45 m. Die Steine sind ungleichmäßig, überwiegend jedoch nicht sehr groß. Sowohl ihre Ansichts- als auch ihre Stoßseiten sind grob bearbeitet, im Gegensatz zu ihrer hinteren Seite, die absichtlich unregelmäßig und vollkommen uneben ist. In die Lücken, die durch die Verbindung der grob bearbeiteten Steinblöcke entstehen, sind kleinere Steine und Mörtel gesetzt. Am hinteren Teil liegt eine Füllung aus unbearbeiteten mit Mörtel zusammengebundenen Steinen und Splittern (Abb. 8). Die Stärke der Füllung schwankt zwischen 0,30–0,60 m. Der letzte (hintere) Füllungsabschnitt ist eine senkrecht liegende Schicht von hartem Mörtel mit einer Stärke von 0,30 m, die die Füllung von Steinen zwischen diesem und den Steinblöcken der Ansichtsseite zusammenhält. Diese Schicht sitzt auf dem festen Fels auf und reicht in der Höhe bis zur Oberkante der vorletzten Schar der Ansichtsseite. Insgesamt beträgt die Mauerstärke 1,30–1,40 m. Da der Boden an dieser Stelle nach Norden stark geneigt ist und damit auch die Stabilität der (nicht weniger als) 2 m hohen Mauer verstärkt wird, wurde der Bereich, der sich südlich der Mauer und bis zu den nördlichen Fundamenten eines ausgegrabenen mykenischen Gebäudes erstreckt, über dem festen Boden mit sandigem Material und Splittern in einer Höhe von 0,60 m und einer Breite von 4,00 m gefüllt.

Diese Form hat die Mauer über die nächsten 32,00 m. Die Keramik, die aus der Füllung gesammelt werden konnte, datiert die Konstruktion in das dritte Viertel des 6. Jh. v. Chr.

Dann ändern sich sowohl die Stütztechnik der Fundamente als auch das Bausystem des Monuments auf den letzten 40,00 m nach Westen (Abb. 9). Die Mauer ist im harten roten Boden fundamentierte, in dem ein 0,20 m tiefer Fundamentgraben geöffnet wurde. Die Fundamentschicht liegt in diesem Fundamentgraben. Die untersten Lage der Steinblöcke, die eine größere Länge (ca. 1,30–1,50 m), aber

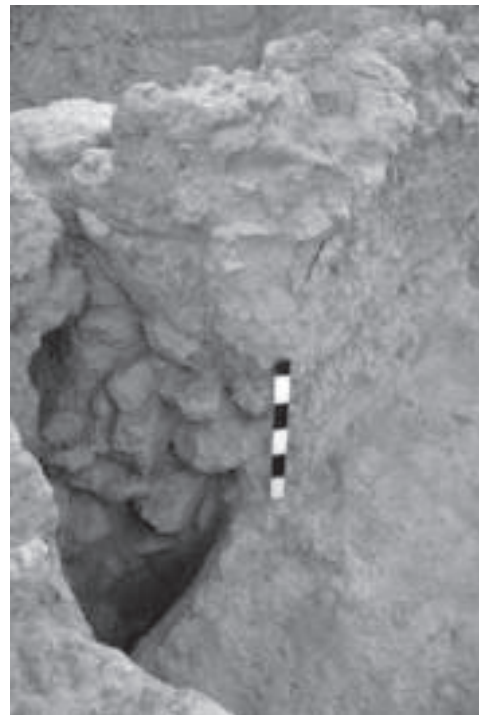


Abb. 8 Korinth. Die Füllung an der Innenseite der archaischen Stadtmauer, Ansicht von Süden (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΑΖ' ΕΠΙΚΑ, Korinth).



Abb. 9 Korinth. Abschnitt D der archaischen Stadtmauer, Ansicht von Nordosten (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΑΖ' ΕΠΙΚΑ, Korinth).

geringere Höhe im Vergleich zu den darüber liegenden Blöcken (ca. 0,30–0,40 m) haben, ist halbhoch in den Fundamentgraben gesetzt, um eine größere Stabilität zu gewährleisten. Die Maße der übrigen Steinblöcke der Außenschale betragen 1,10 m × 0,75 m × 0,50 m, diese sind nach einem sorgfältigeren, aber nicht regelmäßigen, isodomen System gesetzt.

Am hinteren Teil der Mauer befindet sich der Fundamentgraben im festen Boden und hat eine Breite von 1,20 m. Im vorderen Teil des Fundamentgrabens besitzen die regelmäßigen Steine der Außenschale eine schwankende Breite von 0,55–0,80 m. Der hintere Teil, der eine unregelmäßige Breite von 0,65–0,40 m aufweist, wurde mit Splittern und kleinen unbearbeiteten Steinen gefüllt. Die Füllung, die über dem Fundamentgraben liegt, ist durch eine senkrecht liegende Schicht von 0,20 m starkem, hartem Mörtel befestigt. An einigen Stellen fehlt diese senkrecht liegende Mörtelschicht und die Steine der Füllung sind durch Mörtel an die hintere unbearbeitete Oberfläche der Steinblöcke angesetzt, so dass sie einen kompakten Körper bilden.

Anhand des Niveaus des Fundamentgrabens im festen roten Boden an der hinteren Seite der Mauer und des Niveaus der Fundamentschar der Ansichtsseite ist die Gesamttiefe des Fundamentgrabens auf 0,80–1,00 m zu berechnen.

Die Keramik, die aus bestimmten Abschnitten der Füllung des Fundamentgrabens und aus dem letzten Abschnitt der nach Westen verlaufenden Mauer gesammelt wurde, datiert den Abschnitt in das frühe zweite Viertel des 5. Jh. v. Chr. (475–450 v. Chr.).

Zusammenfassend ist nochmals zu betonen, dass der Fundamentgraben, der entlang der Innenseite der Mauer liegt, eine wechselnde Breite von 0,40 m bis 1,10 m hat. Er ist mit kleinen, in festem Mörtel versetzten Kalksteinen gefüllt worden. Zugleich diente dieser Fundamentgraben einer Verstärkung der Mauerkonstruktion. Die Gesamtmauerstärke beträgt damit 1,20–1,90 m. Der obere Teil der Mauer bestand aus Lehmziegeln und ist nicht erhalten.

Einer ersten Auswertung der Befunde und Funde zufolge reicht die Errichtung der Mauer in das dritte Viertel des 6. Jh. v. Chr. zurück. Dieser Datierung entsprechen auch die zahlreichen, hauptsächlich in die Zeit zwischen 580 und 530 v. Chr. einzuordnenden Keramikfunde aus dem nahe gelegenen Steinbruch, der östlich der Mauer untersucht werden konnte und aus dem die Steinblöcke der Mauer stammen (Abb. 10). Der Steinbruch erstreckt sich über eine Länge von mindestens 120 m östlich der Mauer. Nördlich der Mauer diente er zugleich als Vorgraben. Der Steinbruch reicht bis in die Archaik (7.–6. Jh. v. Chr.) zurück. Jedoch ist sein früherer Gebrauch während der geometrischen Zeit (9.–8. Jh. v. Chr.) nicht auszuschließen.

Die Mauer war unter geringfügigen Änderungen bis in frühhellenistische Zeit (Ende 4. Jh. – Anfang 3. Jh. v. Chr.)



Abb. 10 Steinbruch östlich der archaischen Stadtmauer von Korinth, Ansicht von Westen (Foto-Archiv der 37. Ephorie für Prähistorische und Klassische Altertümer, ΑΖ' ΕΠΚΑ, Korinth).

in Gebrauch. Der Mauerverlauf folgt den natürlichen Gegebenheiten der nördlich der antiken Stadt liegenden Abhänge.

Die neu entdeckte Stadtmauer gibt einen Einblick in den Aufbau der Befestigungsanlagen und zeigt die Ausdehnung des Stadtstaates Korinth im Norden. Darüber hinaus werden Fragen zur politischen und wirtschaftlichen Situation des archaischen und klassischen Korinth beantwortet.

Zur Stadtmauer in klassischer Zeit

Abschließend ist kurz zu erwähnen, dass etwa 1000 m westlich der archaischen Stadtmauer Teile einer weiteren Mauer freigelegt wurden. Sie verlief in Südost-Nordwest-Richtung und wurde aus pseudoisodom geschichteten Blöcken errichtet. Sie wurde auf einer Länge von 25,00 m aufgedeckt, wobei ihre erhaltene Mauerstärke 0,65–1,40 m und ihre größte erhaltene Höhe 2,15 m beträgt. Ursprünglich handelte es sich um eine zweischalige Mauer, von der aber nur die Außenschale erhalten ist.

Diese besteht aus sorgfältig behauenen Blöcken ohne Mörtel. An der Innenseite ist die Füllung bis auf eine Stärke von 0,80 m erhalten. An diesem Ort wird ein bedeutendes Tor vermutet, und zwar mit einiger Wahrscheinlichkeit das von Pausanias erwähnte Sikyon-Tor. Dieser Abschnitt der Stadtmauer ist in die Spätklassik zu datieren.

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RECENT RESEARCH IN PALAIOMANINA, ACARNANIA*

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Abstract

The recent investigation of the ancient fortifications in Palaioimanina on the west bank of the Acheloos River by a team of the University of Athens brought to light: a) Parts of an older, early Archaic wall, surrounding an area adjacent to the known Classical fortified ‘city’, which on the one hand sheds light on the early history of the site and on the other helps us to understand the function of the Classical fortifications; b) Evidence about ancient decisions concerning the route of the Classical wall in specific regions and phases of its construction; c) Poor inscribed material, which nevertheless, combined with other finds – written sources and other already known inscriptions – contributes to a better knowledge of the history and character of the ancient city (Metropolis?).

The University of Athens launched in 2006 a systematic exploration of the ancient fortifications at Palaioimanina, a large village on the west bank of the river Acheloos, in collaboration with the 36th Ephorate of Antiquities. The aim of the project is to study the ruins of this significant but practically unknown¹ ancient city and make characteristic parts of them accessible and readable to the public.

Next to the modern village of Palaioimanina strong ancient walls enclose a hill and its foot which falls abruptly to the west bank of the Acheloos. The fortified area measures 7.1 hectares and its ground is very steep and rocky (Fig. 1). Diateichismata divide it in three parts

(Fig. 2): an acropolis on the top of the hill (Fig. 2 I), a second section below, conventionally labelled the ‘lower acropolis’ in modern literature (Fig. 2 II), and finally the lowest area known as the ‘lower city’, which extends down to the river (Fig. 2 III). The walls are relatively well preserved and date to the years between 450 to 350 BC (Fig. 3).²

It is not known with certainty what the site of Palaioimanina was called in antiquity. The main arguments in current bibliography for an identification of the ancient city in Palaioimanina with the Acarnanian city of Metropolis are as follows:³ first, the report of Polybius on the campaign of Philip 5th, king of Macedonia, against the Aitolians in

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¹ Extensive reference to the visible remains of the fortifications with bibliography in: Pritchett 1991, 9–15; Portelanos 1998, 1192–1215; Ley 2009, 87–95, catalogue nos 137–67. Reports on rescue excavations in: Mastrokostas 1961/2, 194–5; Mastrokostas 1967, 322–3; Papapostolou 1979, 208; Kolonas 1983, 128; Kolonas 1987, 183. See also Varoucha-Christodouloupoulou 1962, 421–42, pls 12–13; Schwandner 2000, 552.

² Ley 2009, 87–95.

³ See also Hansen & Nielsen 2004, 366–7 no. 128.

219.⁴ Philip took over and burnt down the city (πόλιν) of Acarnanian Metropolis, at that time occupied by the Aetolians, but could not force the enemy away from its acropolis (ἄκρην). The description corresponds to the division of the intra-mural space in Palaio-manina into separately fortified areas.⁵ The second piece of evidence is an inscription of the 3rd century BC⁶ with a contract defining the border between the territories of Oiniadai and Metropolis. As no other important ruins are known between Oiniadai and Palaio-manina, the ancient city at the modern village must have had common borders with Oiniadai, hence must have been Metropolis. The importance of the site since the Geometric period at least is documented by finds deriving from rescue excavations of graves, including pottery, jewellery and bronze statuettes.⁷

In 2006 and 2007 a painstaking clearing of the fortification walls in their full length took place. Sections of them, which were invisible because of vegetation, came to light. This clearing enabled the modification of previous plans of the fortification, in which sections had been drawn only in part based on exact autopsy. During this cleaning interesting features of the fortification were uncovered, as for example the outlets of carefully built conduits on the outer side of the walls (Fig. 4), which presumably indicate built sectors above or near them.

The final aim of the project is the restoration of characteristic parts of the fortress and their presentation to the public. Two sections of the walls, which were important in antiquity for various reasons, and which are still particularly important, were chosen for investigation and restoration: The first one is the main gate of the fortified area at the river (Figs 5 and 2B).⁸ It is known in the bibliography by its local name *Avloporta*, which means gate of a court, because this monumental gate led to a fortified court in front of the real entrance to the fortress offering increased protection in the case of an assault. The second area of intervention (Figs 6 and 2A) is the section of the wall extending from the best preserved

tower at the south-eastern corner of the 'lower acropolis' (Fig. 2, T1) to the tower protecting the south entrance of the upper acropolis (Fig. 2, T2).⁹ This section is on the one hand one of the best preserved and on the other it is next to the village, which means that it is menaced by uncontrolled modern activity. This circumstance of location means furthermore that the gate is also a very attractive candidate for the presentation of the ancient monument to the public.

An excavation at the side of *Avloporta* looking to the river (east side) brought to light the lowest courses of the wall of the court and of the tower at its north-eastern corner (Figs 5 and 2, Gate F, T10), enabling the restoration of the plan of this least preserved side of the gate and of the fortified court. A trench at the front of the western doorjamb of the gate (south side) set its foundation free for study. Under the first corner-block above today's ground level a second one came to light, on which the carefully hewn outer edge of the upper courses of the doorjamb is continued.¹⁰ So the graphic reconstruction of the gate by Noack¹¹ (Fig. 7) is now confirmed. The foundation beneath stands on bedrock and is made out of a roughly worked block and smaller levelling stones. The pottery, collected mainly at the foundation of the outer side of the gate looking to the river, supports its dating to the years between the middle of the 5th century and the early 4th century BC. Other finds at the gate, such as a spearhead, witness fighting having taken place at it.¹²

In the other investigated sector (Figs 2A and 6) the outer face of the wall seemed to be completely destroyed near a small gate on the south side of the 'lower acropolis'. Excavation and clearing brought to light not only the lowest course of the outer face, but also a considerable number of blocks of higher courses lying exactly under the place where they originally stood. Further east, down to the south-eastern tower of the 'lower acropolis' (Fig. 2 T1), the wall is preserved to a considerable height. It was set free from makeshift modern constructions leaning up against it, such as hencoops and depositories. At the

⁴ Polyb. 4.64–5.

⁵ On the contrary, the site of Righani (about 4 km to the north of Palaio-manina), alternatively identified in modern scholarship with Metropolis, is fortified by a single enclosure. The remarks of Ley 2009, 88, n. 217 on this argument do not count any more after the recent finds of our project: The 'πόλις' (city) seems now to have been the large area enclosed by an archaic wall in the plateau, immediately to the SW of the classical fortification, which as a whole would play the role of an acropolis (ἄκρα)', see the end of this article.

⁶ IG IX² 1.3B.

⁷ Mastrokostas 1961/2, 194–5; Mastrokostas 1967, 322–3; Papapostolou 1979, 208.

⁸ Ley 2009, catalogue nos 162–7.

⁹ Ley 2009, catalogue, Stadtplan, Turm 1 – Turm 2. S.145, Kurtine 5. S.150–2.

¹⁰ This feature at the corners of walls served the alignment of the successive courses of blocks with the use of a plumb.

¹¹ Noack 1916, 227–8.

¹² A similar spearhead from older rescue excavations in Palaio-manina is now deposited in the Archaeological Museum of Agrinion.



Fig. 1 The ancient fortification at Palaioimanina. Aerial photograph, Region of Western Greece.

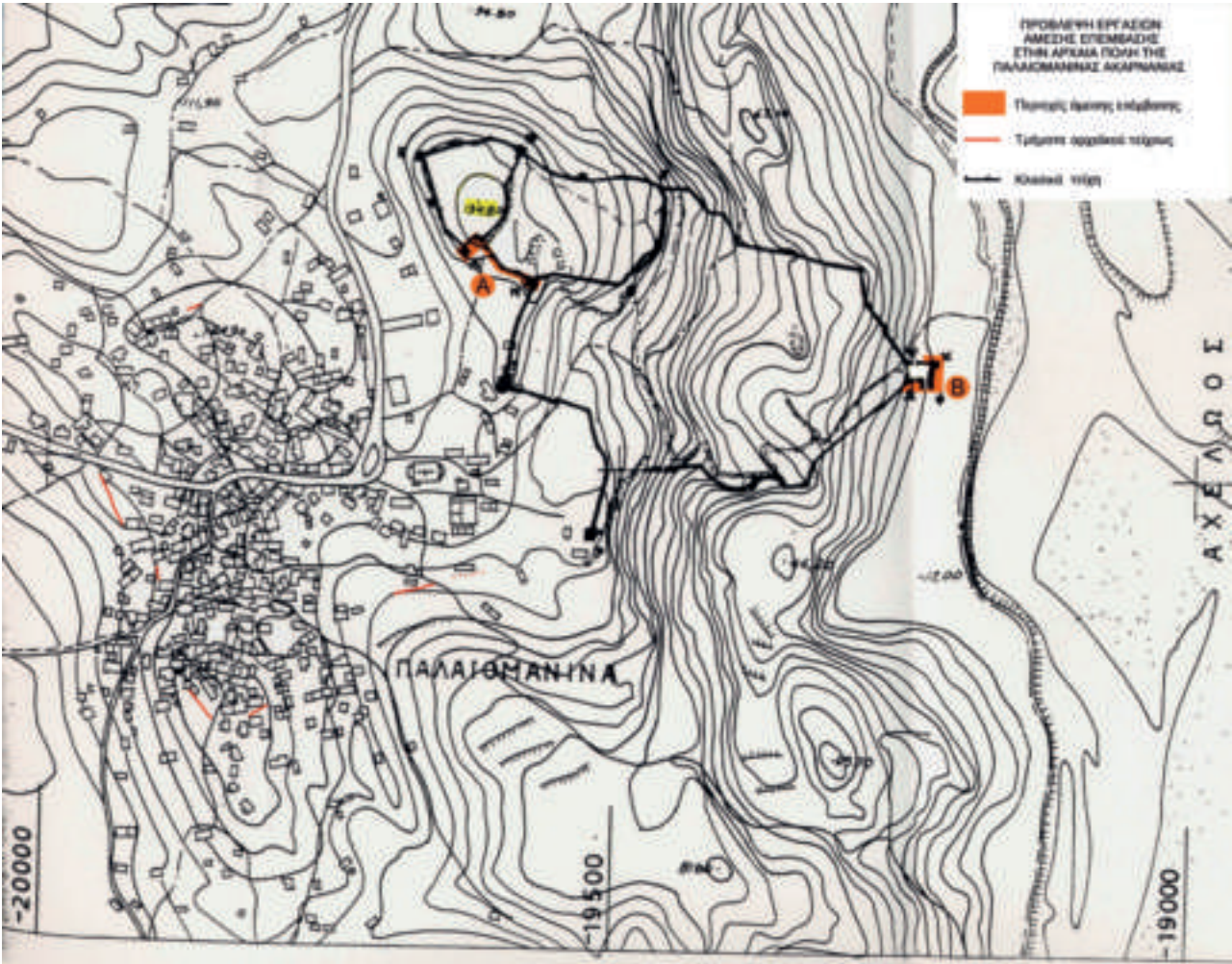


Fig. 2 Map of Palaioimanina on the west bank of Acheloos. Zones of recent research highlighted in red (based on Portelanos 1998).



Clockwise from top left:

Fig. 3 Section of the south side of the ancient walls at Palaioimanina.

Fig. 4 Conduit opening on the outer side of the north-eastern section of the ancient walls.

Fig. 5 The river gate 'Avloporta' of the ancient fortification at Palaioimanina.

Fig. 6 Small gate and south side of the 'lower acropolis'.



Photos: University of Athens, Archive Palaioimanina



Fig. 7 Drawing of 'Avloporta' by Noack 1916. The originally visible first two blocks of the doorjamb shown with red.



Fig. 8 The ruins of the tower at the main gate to the 'upper acropolis' (University of Athens, Archive Palaiomanina).



Fig. 9 Modern hut in front of the south wall of the 'lower acropolis' (University of Athens, Archive Palaiomanina).



Fig. 10 The south wall of the 'lower acropolis' after demolition of the modern hut (University of Athens, Archive Palaiomanina).

western end of this sector the south wall of the 'lower acropolis' joins the circuit of the 'upper acropolis' (Fig. 2A). The main gate leading to the acropolis from the plateau was located on the south side of this junction (Fig. 2, Gate B). It was protected by a strong tower on its left side (Fig. 2, T2), solidly founded on the abruptly falling ground. The lower courses of its four sides were unearthed, as well as a number of blocks of higher courses in its vicinity (Fig. 8). It is evident that the preservation of the walls in this sector, as shown after the work already done, allows a secure and extensive restoration of this part of the fortification, which is about 80 metres long, running from the tower at the main gate of the acropolis to the best preserved tower at the south-eastern corner of the 'lower acropolis'. With this potential in mind our team demolished – after strenuous negotiations with the owner – a big and clumsy hut in front of this sector of the wall, which was partly built with ancient material (Figs 9–10). A big bronze seal depicting a horse between a cross and a tree with the name of its owner ΑΝΔΡΕΑΣ in genitive came out of the debris of the hut among other finds, providing further evidence for the use of the site in Christian times, witnessed by extensive repairs of the west side of the 'upper acropolis' wall.

Especially interesting was the excavation at a small gate in this section of the wall, which leads from the plateau to the 'lower acropolis' (Fig. 2, Gate C: Fig. 11; see also Fig. 6). The gate is relatively well preserved and had two phases of use: two big oblong slabs constituted the threshold of the first phase. The outer one stands 15 cm out of the ground and left a narrow gap between itself and the eastern doorjamb of the gate in order to let the rainwater flow from inside the fortress. The inner slab was situated lower, its level coinciding with the floor



Fig. 11 Excavation at the south gate of the 'lower acropolis' (University of Athens, Archive Palaioimanina).

of the corridor of the gate. On the east side of this slab the socket for the pivot of the door is preserved. On the fragment at its now deteriorated west side one can still see the trace of a narrow hole for a vertical bolt. The gate was thus closed at that time with a single door, which opened inwards. Large square sockets for a horizontal, thick wooden bolt are preserved on both sides of the doorjamb. The strong horizontal bolt was used for additional safety when needed.

In the second period of use half of the width of the inner slab of the threshold was cut deeper, in order with the other half to produce a stopper for a slightly inwards shifted new door. On this later threshold the socket for the pivot of a lighter door is again preserved, as well as the hole for a vertical bolt placed off-centre in its middle. In this phase, then, the door was lighter and bifold. Narrow holes on the walls of the doorway point this time to iron horizontal bolts for additional safety.

The gate opened to a mounting pathway, which turned to the right and led parallel to the wall to the inner space of the 'lower acropolis'. On a rock on the right-hand side of this path, immediately after the entrance (Fig. 12), is inscribed the word ΔΙΟΣ with large letters characteristic of the early 4th century BC¹³ and it seems obvious to suggest that the gate was under the protection of Zeus.

Gates of ancient walls are often dedicated to gods,¹⁴ but the inscription at the gate of Palaioimanina may convey more about the history of the town. The fill down to the ground level of the gate contained mixed Geometric to Byzantine pottery, as well as other objects, which seem to have been washed down from the area of the acropolis above the gate. A number of these fragments are likely to derive from public buildings, e.g. a fragment of an Archaic terracotta waterspout and a series of Hellenistic tiles stamped with the name ΑΝΔΡΟΝΙΚΟΣ.¹⁵ Under the ground level of the Classical gate, however, very important material came to light (Fig. 11), namely undisturbed layers containing early pottery, in a sequence starting from Early Helladic and going through Mycenaean and Geometric down to Archaic times. To this early material



Fig. 12 Rocky ground inside the gate leading to the 'lower acropolis'. The name of Zeus is inscribed on the rock to the right, entering the fortified area (University of Athens, Archive Palaioimanina).

¹³ Letters 10 cm high. *Sigma* with oblique, outwards opening horizontal bars, *Iota* with a primitive Apex at its upper end. Cf. for example Guarducci 1969, 53, fig. 5 and 168, fig. 41.

¹⁴ Launey 1944, 188: Gate dedicated to Herakles; Aischyl. *Sept.* 486–7: Gate in Thebes dedicated to Athena Onga; Paus. 9.8.5: Gate in Thebes called *Hypsistai* after Zeus Hypsistos; Nonnos, *Dionys.* 5.67: The third gate of Thebes was dedicated to Aphrodite, the fifth one to Ares, the sixth to Zeus. Cf. Hermes *Propylaios*.

¹⁵ Letters with Apices. A with broken cross-bar. Δ and O less high than the other letters. To be dated to the 2nd/1st century BC, cf. Guarducci 1969, 141, fig. 28; 158, fig. 37; 405, fig. 85. Andronikos is a common name in the region of Aetolia and Akarnania: Grainger 2000, 100–1. The stamp on the tiles can state the name of their producer, alternatively the name of a powerful person who financed the roof of a public building on the acropolis. In this case a possible candidate would be the politician Andronikos, son of the Aetolian officer Andronikos, who was decapitated by Aemilius Paulus in 167 BC as an enemy of Rome, Livius 45.31.15.



Fig. 13 Google Earth Digital Globe image of the region of Palaio Manina. Classical and sections of Archaic fortification highlighted in red. The River Acheloos is at the bottom.

belong also flint and obsidian tools. From Archaic times fragments of painted pottery and miniature vases, common as humble votive offerings in sanctuaries, are especially remarkable.¹⁶ These finds support the assumption of cult activity in the region. As there is no evidence for such an activity on the upper acropolis next

to this place, one can infer that before the construction of the Classical fortification a traditional cult existed at the place of the later gate which, as time passed, was appropriated by Zeus, under whose protection one chose to put the gate on this side of the wall. We hope that further excavation will shed light on this matter.

¹⁶ On a large sherd is preserved part of a warrior on horseback with the spear of another horseman in front of him. The careless drawing, the synoptic contours of the figures and the primitive incision of details show that the fragment belongs to the group of clumsy Attic products of the late 6th and early 5th century BC as e.g. CVA, Greece 7, Taf. 8–15.

What the early material does prove, beyond debate is the uninterrupted continuity of life since early prehistoric times in the region.

Our team also addressed the issue whether and to what extent the fortified area was inhabited. The landscape in the 'lower acropolis' as well as in the 'lower city' is very rough (Fig. 1). Steep slopes alternate with sharp rocky masses all the way down to the river gate. Only a few fairly even places appropriate for habitation can be found and excavation in two such places uncovered foundations of ancient buildings. In the south-eastern part of the 'lower city' the foundations of a house with at least three rooms on different levels were unearthed. The foundations are composed with heavy, roughly hewn blocks of local limestone, which stand in some places on the slightly levelled rock. Material, construction and finds, primarily fragments of jars and domestic ware, testify to a Hellenistic farm. At a second place in the middle of the 'lower acropolis' the poorly preserved foundations of another house dated to the Roman period were excavated. More foundations pop out of the thick vegetation covering the landscape in other places of the so called 'lower city', but the areas suitable for habitation inside the walls, however, seem too limited to accommodate the number of inhabitants corresponding to the size and the power of the ancient town in Palaioimanina otherwise known from literary sources and other archaeological finds.¹⁷ A large part of

the steep and rocky landscape was obviously destined to shelter the herds of the dwellers in the case of an attack. Animals were, and still are, a most valuable component of property in the region.

Where did the main part of the population live if not within the Classical fortification?¹⁸ An unexpected discovery helps us to answer this question. The modern village occupies the area of a gentle height in the plateau to the south-west of the ancient fortification (Figs 1 and 13). Its periphery coincides roughly with the curvilinear edge of this height, where the ground begins to sink more or less smoothly towards the wider plateau area. Around this line sections of an up to now unknown Archaic wall are preserved. The wall seems to have enclosed the gentle height in the plateau next to the Classical fortification, exactly as the modern village does. The roughly polygonal wall is composed of casually assembled, almost unwrought blocks, in the same way in which the oldest walls of the Acarnanian cities of Thyrraeon and Palairos are built.¹⁹ We studied this wall in three places by the means of cleaning and excavation. At the foot of a high terrace of modern houses, flanking a road for tractors on the west edge of the village, more than fifty metres of the lower courses of this Archaic wall are preserved (Fig. 2 AW1; Fig. 13, 1; Fig. 14). In the court of another house one more sector of the wall is incorporated in modern constructions (Fig. 2, AW2; Fig. 13, 2). Most fruitful for our research was the excavation of a third sector in the garden of a house lying



Fig. 14 Remnants of Archaic wall at the foot of a modern terrace wall, western edge of village of Palaioimanina (University of Athens, Archive Palaioimanina).

¹⁷ The strong fortification, which is unlikely to have been the work of a foreign power, testifies to the organization, wealth and strength of the population in the region.

¹⁸ The finds from older rescue excavations as well as from the recent systematic investigation show that the site was uninterruptedly inhabited since prehistoric times.

¹⁹ Ley 2009, 171, catalogue no. 395, fig. 513; 120–1, catalogue no. 248, fig. 322.



Fig. 15 The stone fill at the inner side of a section of the Archaic wall in the garden of a house in the south-western quarter of the village of Palaioimanina (University of Athens, Archive Palaioimanina).

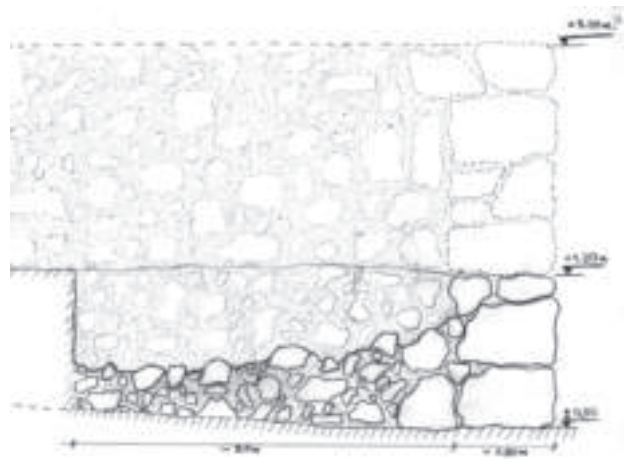


Fig. 16. Section of wall shown in Fig. 15 with suggested completion of the elevation (University of Athens, Archive Palaioimanina).

further south, approximately at the point where the wall turns eastwards (Fig. 2, AW3; Fig. 13, 3). This excavation has shown that the wall was constructed of only one face, made out of large, almost unwrought blocks, strengthened at the rear with layers of boulders mixed with smaller fieldstones and earth (Figs 15–16). The whole construction formed a strong terrace, at the edge of which must have stood makeshift parapets. This corresponds accurately to the structure of the primitive fortifications of early Archaic settlements, which Frederick Winter describes as ‘merely a terrace, supported by a heavy retaining wall’.²⁰ The newly found Archaic wall in Palaioimanina is a rare example of an early terrace wall, as are the walls of Old Smyrna, of Priniias in Crete and elsewhere.²¹ The pottery collected in the layers of stones behind the wall face is exclusively Geometric and Archaic, so that we have to date the wall at the latest to the 6th century BC. On the basis of these pieces of evidence one can argue that this primitive wall enclosed the main residential area of the ancient city in Palaioimanina, presumably the ancient Metropolis. This conclusion is corroborated by a Habbo Lolling’s statement in 1878 in a manuscript which remained unpublished until 1989, when it was printed under the title *Reisenotizen aus Griechenland*.²²

Der mit der Akropole verbundene Fläche, fast auf derselben Höhe liegende Raum dehnt sich nach Westen und Südwesten aus und an seinem Rande liegen jene Wlachenhäuser. In seinem Innern ziemlich zahlreiche

Mauerspuren. Hier war der eigentliche Stadtboden, während die complicirten in der Aolóporta ausmündenden Befestigungen an den östlichen waldbedeckten Anhängen wesentlich nur zum Schutz des oben liegenden Plateaus (Akropole und innerer Stadtraum) angelegt waren.

The search for remains of ancient buildings inside the Archaic wall on the plateau is difficult today, 130 years after the visit of Lolling, because of the modern village. The project plans to dig in a few plots in the village that are not yet built on, in order to check and enrich the results of the work done up to now.

What seems to be safely concluded now is that the modern village kept the line of the ancient enclosure as its border. Is this an indication of a more or less uninterrupted continuity of habitation in the region? The excavation at Gate C has already shown human activity at the site since Early Helladic times. The Mycenaean and Geometric era are also represented in the material found there. Nevertheless we do not know in this early part of our research where the corresponding settlement was. The earliest known settlement up to now is the one inside the Early Archaic (7th–early 6th century BC) enclosure in the plateau to the south-west of the Classical fortification.

Considering the line of the Archaic wall and the relief of the ground between it and the Classical fortification one is inclined to postulate an Archaic phase of the ‘Upper

²⁰ Winter 1971, 128; cf. Frederiksen 2011, 51–3, fig. 4.

²¹ Winter 1971, 128–31; Frederiksen 2011, 188–90; 183–4.

²² Lolling 1989, 214.

acropolis' of the latter, connected with the early enclosure. This assumption is corroborated by the fact that Late Geometric burials were found during rescue excavations under the main church of the modern village.²³ Burial grounds are normally situated immediately outside the limits of an ancient Greek city. The location of the early tombs in Palaioimanina could therefore indicate the trace of the east side of the enclosure of the Archaic city; it should have run between the east border of the modern village and the burial ground, up to the hill of the Classical 'Upper acropolis'. The settlement in the plateau with its old-fashioned enclosure, the actual city of the place, must have continued its life and function in Classical times parallel to the strong fortification, which was built presumably when the region was involved in the rivalry between Athens and Sparta.²⁴ The coarse and abrupt hill foot protruding to the river north-west of the actual city, once fortified, functioned mainly as a stronghold and a refuge in times of war, providing at the same time secure communication between the city and the then navigable river. The increased protection of the river gate 'Avloporta' had certainly to do with the special importance of the access to the water routes in case of threat. The postern at the south wall of the 'Lower acropolis' on the other hand seems to have provided easy access to the fortified area from inside the city during peace and war.

A new interpretation of Polybius' statement concerning the attack of Philip V on Metropolis, namely that he took over and burnt down the city but did not force the Aitolian garrison away from its acropolis, seems now more probable than those based only on the structure of the Classical fortification:²⁵ the Aitolians, according to the historian, left the city (τὴν πόλιν ἐξέλιπον) and retreated to the acropolis. This means that the city was not sufficiently protected, and this would be the case of the actual city in the plateau with its old-fashioned enclosure, not the case of the 'Lower city' of the Classical fortification, whose protection was quite as strong as the one of the 'Upper acropolis'. Philip, in his rapid march against the Aitolians, set fire to the defenceless city and marched further to the other side of the river, where he overwhelmed the Aitolian cavalry cutting off the garrison sitting in the fortress of Metropolis, rendering it ineffective. If this new interpretation of Polybius is right, the argument for the identification of Palaioimanina with Metropolis becomes much stronger.

We hope that work in the next years will provide evidence which will confirm or modify our present conclusions.

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²³ Mastrokostas 1961/2, 194-5; Mastrokostas 1967, 322-3; Papapostolou 1979, 208.

²⁴ Thuc. 2.30, 2.33, 2.66, 2.80-93. 2.102.

²⁵ See above notes 4 and 5.

NEUE FORSCHUNGEN IN ERYX: DIE AUSGRABUNGEN AN DER STADTMAUER UND DIE TOPOGRAPHIE DER STADT*

Salvatore De Vincenzo

Zusammenfassung

Im Rahmen der neuen Forschungen in Eryx werden die Chronologie der verschiedenen Bauphasen der Stadtmauer sowie der gesamte Verlauf der Befestigungsanlage, die heutzutage nur auf der Westseite erhalten ist, erforscht. In diesem Zusammenhang ist die Annahme von zwei antiken Bauphasen in der Forschung allgemein anerkannt. Die erste Bauphase, deren Datierung bis dato zwischen dem Ende des 8. und dem 4. Jh. v. Chr. angesetzt wurde, kann aufgrund der Auswertung der Funde aus den Fundamenten der Türme in das frühe 5. Jh. v. Chr. datiert werden. In diesem Zeitraum ist auch die erste Münzprägung von Eryx belegt. Diese Neuerungen könnten ein Hinweis für eine erste Strukturierung der Stadt als Polis sein. Für die zweite Bauphase kann eine zeitliche Einordnung in die erste Hälfte des 3. Jhs. v. Chr. vorgeschlagen werden. Diese Chronologie lässt eine Umstrukturierung der Stadtmauer im historischen Kontext des ersten punischen Krieges vermuten. Die letzten drei Bauphasen gehen mit einer Ausweitung der Stadt nach Süden während des Mittelalters einher.

Einleitung

Eryx liegt auf einem ca. 750 m hohen Berg an der westlichsten Spitze Siziliens. Die geographische Lage von Eryx bildete einen wichtigen Schnittpunkt zwischen verschiedenen Territorialmächten und Bevölkerungsgruppen: den Elymern, den Griechen und den Phöniziern (Abb. 1). Auch die Götterwelt, in der einheimische mit griechischen

Gottheiten gleichgesetzt wurden, spiegelt die Intensität der kulturellen Kontaktzone. So ist der Name Eryx von einer Figur des griechischen Mythos entlehnt. Eryx war der Sohn von Aphrodite und Buta, einem indigenen König. Dem Mythos zufolge soll es zu einem Kampf zwischen Eryx und Herakles gekommen sein, bei dem Eryx unterlag und vom griechischen Helden getötet wurde. Der Berg, auf dem Eryx im Kampf fiel, trägt seitdem seinen Namen.¹

* Die Grabungskampagnen wurden vom Exzellenzcluster 264 „TOPOI. The Formation and Transformation of Space and Knowledge in Ancient Civilizations“ und durch Mittel des Instituts für Klassische Archäologie der FU Berlin kofinanziert. Ich danke dafür recht herzlich Friederike Fless. Seit November 2012 wird das Projekt von der Fritz Thyssen Stiftung gefördert, der ich hiermit für ihre Zuwendung danken möchte.

¹ Zu den zahlreichen literarischen Quellen bezüglich Eryx s. Coarelli & Torelli 1984, 54–7; De Vido 1989; zuletzt Lietz 2012.

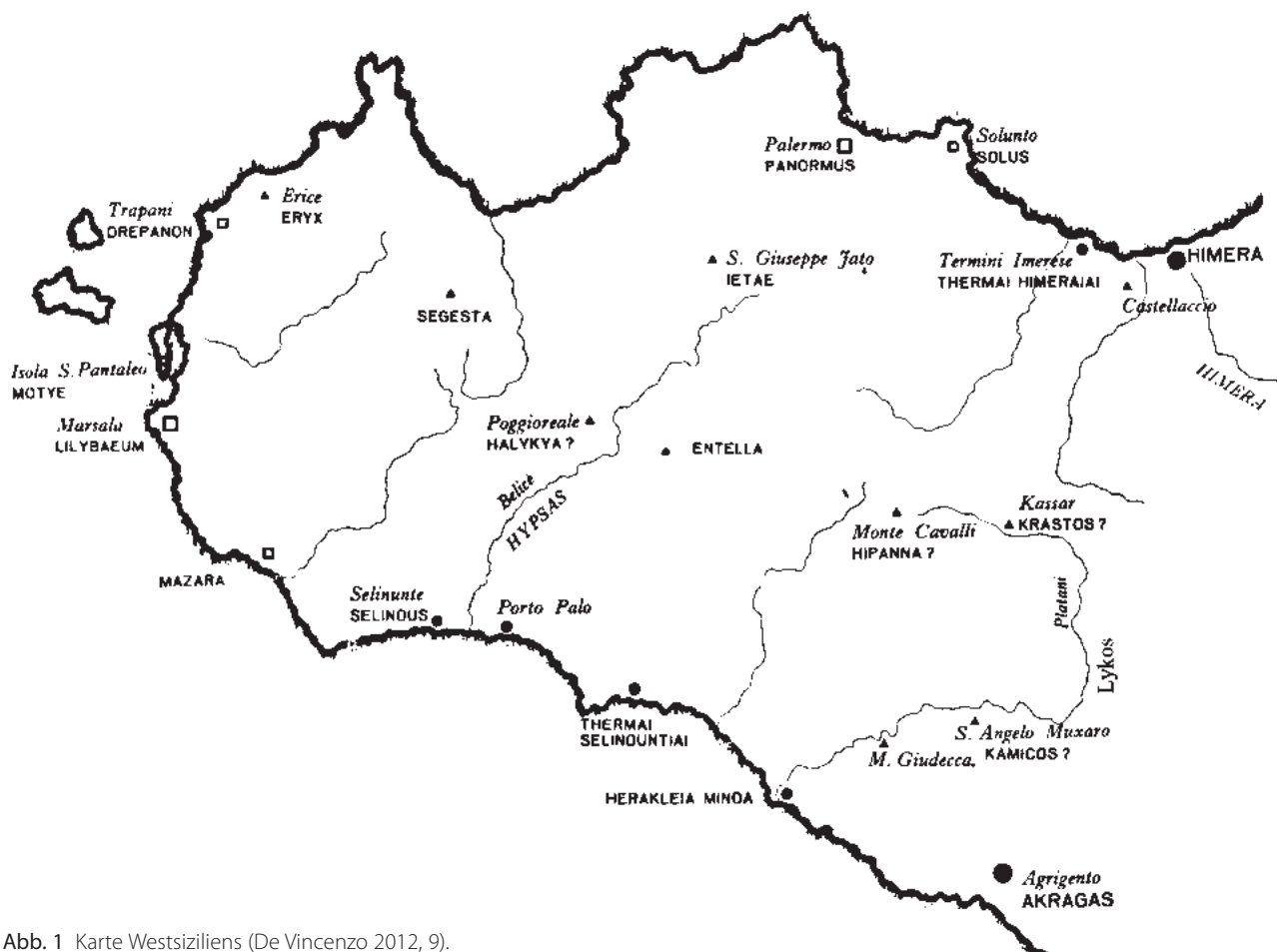


Abb. 1 Karte Westsiziliens (De Vincenzo 2012, 9).

Die strategisch günstige Lage von Eryx brachte der Stadt darüber hinaus eine überregionale, religiöse Bedeutung ein.

Die Stadt war, wie die literarischen Überlieferungen zeigen, einer der wichtigsten Orte Siziliens. Nichtsdestoweniger hat Eryx in der modernen Forschung lange Zeit wenig Beachtung gefunden.

In archaischer Zeit und noch bis zum 5. Jh. v. Chr. lag die Stadt in der Hand der einheimischen Bevölkerungsgruppe der Elymer.² Eryx hatte ein weites Territorium, welches sich bis zum unterhalb des Berges gelegenen Drepanon, dem heutigen Trapani, erstreckte. Literarische Quellen

bezeichnen den Ort als Hafen von Eryx.³ In Eryx war der Tempel der Aphrodite von besonderer Bedeutung, den der namensgebende Held Eryx zu Ehren seiner Mutter gegründet haben soll.⁴ Polybios behauptet, dass das Heiligtum das reichste in ganz Sizilien war und dass es sich auf dem höchsten Punkt des Berges erhob, während die Stadt an einer niedrigen Stelle lag.⁵

Während der ständigen Kriege zwischen Karthago und Syrakus, der mächtigsten griechischen Stadt auf der Insel, rückte Syrakus in den Jahren 397/6 v. Chr. immer weiter in das punische Westsizilien vor und zerstörte diverse punische Städte, so z. B. Motya und Solunt.⁶ Eryx wurde nach Diodor von Dionysios I. von Syrakus kampflos

² Zur Zugehörigkeit von Eryx zu den Elymern noch im 5. Jh. v. Chr. s. Garbini 2004, 30–1.

³ Diod. Sic. 15.73.3.

⁴ Diod. Sic. 4.83.1.

⁵ Plb. 1.55.8–9. Aufgrund der zentralen Lage trafen sich hier auch die Elymer mit den attischen Gesandten, um sich über ein Bündnis gegen die Karthager einig zu werden: Thuc. 6.46.

⁶ Zu diesen Ereignissen s. Sordi 1980, 217–20.

erobert.⁷ Diodor berichtet weiter, die Bewohner von Eryx hätten sich, eingeschüchtert durch die syrakusanische Armee und vom Hass auf die Karthager angetrieben, auf die Seite von Syrakus gestellt. Bereits im folgenden Jahr wurde jedoch die Stadt erneut vom karthagischen Feldherrn Himilco zurückerobert.⁸

Diese Eroberung brachte für Eryx eine neue Blüte mit sich, sowohl im politischen wie auch im religiösen Sinne. Der Tempel der Aphrodite behielt seine überregionale Bedeutung für Westsizilien. Der Kult dieser Gottheit ist in der Hauptstadt Karthago wie auch im punischen Territorialbereich belegt.⁹

In dieser punischen Phase setzt in Eryx die Münzprägung ein, wie sie für die punischen Städte Panormos und Solunt bereits seit dem 5. Jh. v. Chr. belegt ist.¹⁰ Von besonderem Interesse ist eine Inschrift mit einer Widmung an Astarte Erykina, in der für Eryx zwei Sufetes, Inhaber des wichtigsten punischen Amtes, genannt werden.¹¹ Eryx ist damit die einzige Stadt Siziliens, für welche das Amt des Sufetes belegt ist. Dies verdeutlicht die doppelte Bedeutung der Stadt: die neue politische Macht sowie die traditionelle religiöse Stellung. Eryx muss als eine Stadt von herausragender politischer Bedeutung innerhalb der punischen Territorialmacht Westsiziliens angesehen werden.

Im Zuge des von Pyrrhus angezettelten Eroberungskrieges auf Sizilien wurde die karthagische Vorherrschaft der Stadt für kurze Zeit abgelöst.¹² Während des ersten punischen Krieges war Eryx wieder unter punischer Kontrolle und wurde zum Schauplatz diverser entscheidender Schlachten. Hamilkar zerstörte 260 v. Chr. mit Ausnahme des Aphrodite-Heiligtums die gesamte Stadt und siedelte die Bevölkerung nach Drepanum um.¹³ Hiermit sollte verhindert werden, dass

die Römer die Stadt als Basis für eine Vorherrschaft auf Sizilien nutzen konnten.¹⁴

Nach dem Krieg fiel Eryx endgültig in die Hände der Römer und wurde Teil der römischen Provinz Sicilia. Wie literarische Quellen deutlich zeigen, behielt Eryx auch in römischer Zeit seine zentrale Funktion.¹⁵

Cicero ergänzt, dass einer der beiden sizilischen Quästoren *montem Erycem obtinebat* und zeitweise in Eryx residiert hat.¹⁶ Die zwei Quästoren der Provinz mussten, bevor sie ihr Amt antreten durften, das Heiligtum von Eryx besuchen und dort der Göttin opfern.

Der punische Kult der Astarte Erykina von Eryx wurde von den Römern mit der Verehrung der Venus gleichgesetzt. Mit dem zweiten punischen Krieg gelangte der Kult nach der Schlacht am Trasimenischen See im Jahr 217 v. Chr. nach Rom.¹⁷ Der karthagischen Venus Erykina wurde in Rom ein Tempel auf dem Capitol erbaut. Einen zweiten Tempel erhielt die Göttin im Jahr 181 v. Chr. vor der Porta Collina.

Im Gegensatz zu den historischen und epigraphischen Quellen sind die archäologischen Überreste aus Eryx bis heute sehr spärlich. Aufgrund der weitläufigen Überbauung durch die moderne Stadt ist die Struktur der antiken Siedlung noch unbekannt (Abb. 2). In der heutigen Stadt, die eine dreieckige Form aufweist, sind an drei Stellen antike Überreste auszumachen: eine Nekropole im Südteil der Stadt (Abb. 2: F), Hinweise auf das Venus-Erykina-Heiligtum, welches unter der mittelalterlichen Burg vermutet wird (Abb. 2: E), und ein Teil des Mauerrings (Abb. 2: 1–18). Im Umfeld der modernen Porta Trapani wurden 1968 Reste einer antiken Nekropole gefunden. Hier wurden zwölf Brandbestattungen in punischen und griechischen

⁷ Diod. Sic. 14.48.1.

⁸ Diod. Sic. 14.55.4.

⁹ Garbini 2004; Lietz 2010; Lietz 2012; Ruiz Cabrero 2010.

¹⁰ Zuletzt s. Tusa Cutroni 2010.

¹¹ CIS I 135. Eine Votivinschrift aus der Nekropole von Eryx zeigt das gleiche karthagische Formular und nennt die Götter Tanit und Baal Hammon: Amadasi Guzzo 1967, 77–9; Garbini 2004, 30.

¹² Diod. Sic. 22.9.

¹³ Diod. Sic. 23.8.

¹⁴ Zonar. 8.11. Im weiteren Verlauf des ersten punischen Krieges gelang es den Römern jedoch schließlich, Eryx zu erobern und vor Ort zwei Präsidien zu errichten: die eine auf dem Berg und die andere an der Straße nach Drepanum (Plb. 1.55.10). Im Jahr 244 v. Chr. eroberte Hamilkar das Gebiet zwischen den beiden römischen Stützpunkten zurück. Dieser Zustand blieb bis zum Ende des ersten punischen Krieges unverändert.

¹⁵ Diod. Sic. 4.83.4.

¹⁶ Cic. ver. 2.2.21–2.

¹⁷ Liv. 22.9.7–10.

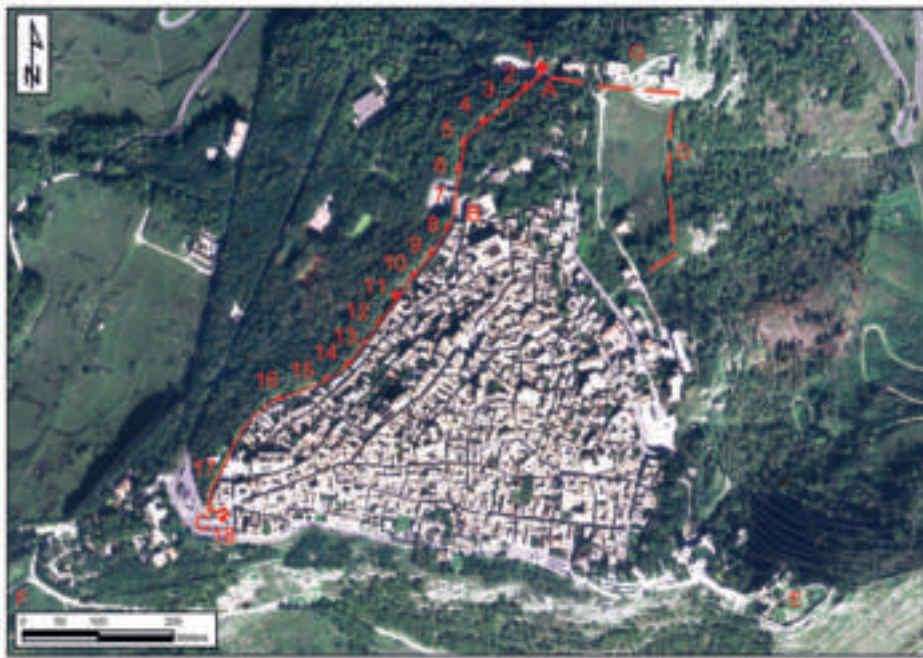


Abb. 2 Erice. Plan der modernen Stadt: 1–18: die noch sichtbaren Türme der Stadtmauer; A: ‚Porta Spada‘; B: ‚Porta Carmine‘; C: ‚Porta Trapani‘; D: ‚Porta Castellammare‘; E: Stadtburg; F: die hellenistische Nekropole; G: vermuteter Nordostverlauf der Stadtmauer (S. De Vincenzo).

Amphoren ausgegraben. Diese datieren alle in die Zeit zwischen dem Ende des 4. und der Mitte des 3. Jh. v. Chr. Auffällige Brandspuren in demselben Bereich wurden von den damaligen Ausgräbern als Ustrinum, d. h. Verbrennungsplatz, gedeutet.¹⁸

Die Burg liegt auf dem höchsten Punkt des Berges, wo sich nach Diodor der Tempel der Aphrodite befunden haben soll. Im Jahr 1931 wurde ein kleines Areal im weiten Burghof vom damaligen Direktor der Soprintendenza, Giuseppe Cultrera, untersucht. Er entdeckte einige Elemente, die als Baudekoration eines Tempels angesehen werden. Darüber hinaus wurden auch verschiedene Strukturen ans Licht gebracht, die vom Ausgräber als Thermenanlage interpretiert wurden.¹⁹

Von der Befestigungsanlage haben sich 18 Türme und drei Stadttore erhalten. Dabei handelt es sich um die Porta

Spada, die Porta Carmine und die Porta Trapani (Abb. 2: B–D).²⁰ Die Stadtmauer ist nur noch auf der Westseite der Stadt auf einer Länge von ca. 800 m erhalten. Die Türme weisen, wie frühere Forschungen ergeben haben, drei unterschiedliche Bauphasen auf. Die jüngste ist in das 13. Jh. n. Chr. zu datieren.²¹ Die Bauabfolge dieser Befestigungsanlage konnte noch nicht genau bestimmt werden. Der Baubeginn wird zwischen dem Ende des 8. und dem 4. Jh. v. Chr. vermutet.

Einige Abschnitte der Stadtmauer von Eryx wurden 1957 und 1999 z. T. untersucht.²² Die Ergebnisse dieser Ausgrabungen wurden leider nicht ausführlich publiziert.²³ Nach einer neueren Betrachtung müssten die Befestigungsmauern aufgrund der Verbindung der Mauer und der rechteckigen Türme in das 4. Jh. v. Chr. datiert werden.²⁴ Diese Annahme würde durch Diodor gestützt, der die Angst der Bürger von Eryx beschreibt,

¹⁸ Bisi 1971.

¹⁹ Cultrera 1935, 316–7; Barresi 2010, 165; De Vincenzo 2010, 42–4.

²⁰ Im 17. Jh. gab es, wie Antonio Cordici berichtet, 25 Türme. Für die 1960er Jahre sind nur noch 13 Türme überliefert: Bisi 1968, 276. Heute können 18 Türme lokalisiert werden.

²¹ Tusa & Nicoletti 2003, 1222–5.

²² Die Ausgrabung von Jole Bovio Marconi fand vom 12. bis 26. August 1957 statt. Es wurden 20 Schnitte von 5 m × 1,6 m entlang der Westseite der Türme zwischen der Porta Spada und der Porta Carmine angelegt. Diese Untersuchung wurde leider nie publiziert: Bisi 1968, 278–9. Die Ausgrabung von Anna Maria Bisi, die von November bis Dezember 1967 stattfand, diente dem Ziel, die Türme 1, 8 und 11 zu untersuchen: Bisi 1968. Fabrizio Nicoletti und Sebastiano Tusa haben im Winter 1999 die Türme 5, 6 und 10 ausgegraben: Tusa & Nicoletti 2003.

²³ Nicoletti und Tusa setzen die Errichtung der ersten Bauphase der Stadtmauer in die Zeit zwischen dem 7. und 6. Jh. v. Chr. Nachdem, ihrer Meinung nach, die Mauer in römischer Zeit außer Funktion war, folgte im 13. Jh. eine zweite Bauphase: Tusa & Nicoletti 2003, 1235. Nach Bisi wurde die Mauer zwischen dem 8. und 7. Jh. v. Chr. errichtet, es folgte eine zweite Bauphase im 6.–5. Jh. v. Chr. sowie eine dritte in römischer Zeit: Bisi 1968, 291–2.

²⁴ Zirone 2003, 1371.

als die Soldaten von Dionysios I. von Syrakus 397/6 v. Chr. die ungeschützte Stadt ohne Gegenwehr einnehmen konnten.²⁵ Deshalb postuliert Donata Zirone, dass der Ausbau der Befestigungsanlage erst nach diesem Ereignis erfolgte.²⁶

In der Forschung hat sich für die aus großen, unregelmäßig grobbehauenen Felsblöcken bestehende Befestigungsmauer von Eryx die Bezeichnung ‚Zyklopische Mauern‘ eingebürgert. Schon in der älteren Forschung wurde zwischen drei Bauphasen unterschieden; eben dieser ‚zyklopischen‘ Bautechnik aus großen Felsblöcken, die in die Zeit zwischen dem 7. und 4. Jh. v. Chr. datiert wird, einer isodomen Bautechnik aus dem 4.–3. Jh. v. Chr. und einer letzten, mittelalterlichen Bauphase.²⁷ Die mittelalterliche Bautechnik, die vermutlich zeitgleich mit anderen Bauten der Stadt ist, besteht aus kleinen, unregelmäßigen Steinen, die mit Mörtel verbunden waren. Im Zuge dieser letzten Phase sind die drei großen Stadttore erbaut worden.

Die neuen Forschungen und die Chronologie der Stadtmauer

Im Rahmen der neuen Forschungen in Eryx werden die Chronologie der verschiedenen Bauphasen der Stadtmauer sowie der gesamte Verlauf der Befestigungsanlage, die heutzutage nur auf der Westseite erhalten ist, erforscht. Die Analyse der Bautechniken dieser Stadtmauer hat gezeigt, dass die noch sichtbaren Reste der Mauer bis zum heutigen Gehniveau die bereits weiter oben angedeutete mittelalterliche Bautechnik aufweisen. Im Allgemeinen hat die Stadtmauer eine Breite von ca. 2,5 m. Die Überreste von älteren Mauern haben sich nur bei den Türmen, insbesondere bei den nördlichsten, erhalten. In diesem Zusammenhang sind zwei Bauphasen unterscheidbar, die vor dem Mittelalter entstanden sind.

Die ‚zyklopischen Mauern‘ bilden die älteste Phase. Die Mauern ruhen auf einem Sockel aus großen, unregelmäßigen, grobbehauenen Felsblöcken, die bis zu ca. 2,8 m lang sein können. Der Sockel weist gegenüber dem aufgehenden Mauerwerk einen Vorsprung auf (Abb. 3: A). Die Felsblöcke sind, wie auch die Quader der

folgenden Bauphasen, ohne Mörtel verbunden. Ein solcher Sockel ist bei den Türmen 1–6 sowie bei Turm 9 sichtbar.

Das über dem Sockel aufgehende Mauerwerk besteht aus Felsblöcken. Diese sind jedoch kleiner und regelmäßiger behauen (Abb. 4: A). Ein solcher Aufbau ist für die Türme 2, 3, 5 und 9 belegt.

Die zweite Bauphase ist durch die Verwendung regelmäßiger Quader von unterschiedlicher Länge gekennzeichnet. Die einzelnen Blöcke können bis zu ca. 1,5 m Länge aufweisen und zeigen durchaus Ähnlichkeit zum Opus Quadratum Mauerwerk (Abb. 5: A). Diese zweite Bautechnik ist bei den Türmen 1, 4–6 und 8–11 nachzuweisen.²⁸

Nur die Türme 1–11 weisen die zwei antiken Mauerwerkstypen auf. All diese Türme besitzen eine ähnliche Breite zwischen 9,5 und 10,5 m und eine vergleichbare Tiefe zwischen 4,7 und 5,9 m. Größer sind hingegen zwei Türme: Turm 1 ist ca. 14,4 m breit und 11,3 m tief, Turm 11 ist ca. 10,5 m breit und 8,5 m tief.

Diese lichten Weiten stehen in krassem Gegensatz zu den Ausmaßen jener Türme, die südlich des Turms 11 liegen. Diese messen nur ca. 8 m in der Breite und zwischen ca. 2,4 und 3 m in der Tiefe und sind ausschließlich in der mittelalterlichen Bautechnik errichtet. Das Fehlen des antiken Mauerwerks bis hinunter zum Gehniveau sowie die deutlich geringere Größe können zu der berechtigten Annahme führen, dass diese Türme erst im Mittelalter entstanden sind.

Auf diese Analysen zu den Bautechniken der Befestigungsmauer folgte im Sommer 2010 und 2011 je eine Grabungskampagne. Es wurden fünf Türme untersucht, deren Erforschung angesichts des Vorhandenseins aller bislang bekannten Bautechniken besonders lohnenswert erschien.

Es handelt sich um die Türme 1, 5 und 6, die nördlich der sog. Porta Carmine liegen und die besterhaltenen Beispiele der ersten Bauphase darstellen. Darüber hinaus wurden die Türme 9 und 11 südlich des Tores erforscht. Die Mauerabschnitte zwischen den Türmen sind nur bei Turm 6 untersucht worden.

²⁵ Diod. Sic. 14.48.1.

²⁶ Die Form einiger punischer Buchstaben, die auf verschiedenen Quadern noch sichtbar sind, wurde von Maria Giulia Amadasi Guzzo in das 4. Jh. v. Chr. datiert: Bisi 1968, 278; Zirone 2003, 1370 Anm. 42.

²⁷ De Vido 1994, Tusa & Nicoletti 2003, 1223–5, 1235.

²⁸ Die Türme 6 und 11 zeigen etwa regelmäßige Quader, die ein Hinweis auf eine weitere Bauphase sein könnten. Diese Annahme müsste jedoch durch weitere Grabungen bestätigt werden.



Abb. 3 Erice. Nordseite des Turms 4: A: Mauersockel der ersten Bauphase; B: Maueraufriss der zweiten Bauphase; C: mittelalterliches Mauerwerk (S. De Vincenzo).



Abb. 4 Erice. Nordseite des Turms 3: A: Maueraufriss der ersten Bauphase; B: mittelalterliches Mauerwerk (S. De Vincenzo).



Abb. 5 Erice. Nordseite des Turms 6: A: Maueraufriss der zweiten Bauphase; B: mittelalterliches Mauerwerk (S. De Vincenzo).

Chronologische Hinweise bezüglich der ersten Bauphase lieferte die Ausgrabung an der nördlichen Seite des Turms 9. Die West- und Nordmauer des Turms zeigen den Sockel der ersten Bauphase und auf diesem befinden sich Blöcke, die mit der dritten Bauphase der Stadtmauer zu vergleichen sind (Abb. 6: B, D). Unter dem Sockel haben sich einige regelmäßige Quader erhalten, die denen im oberen Teil des Mauerturms ähneln. Die Untersuchung der Baustruktur dieser Mauern hat zu der Vermutung geführt, dass diese Quader als nachträgliche Flickung unter die Felsblöcke des Sockels geschoben wurden und deshalb auf eine jüngere Phase zurückzuführen sind (Abb. 6: C). Angesichts des schlechten Erhaltungszustands dieser großen, grobbehauenen Felsblöcke kann man davon ausgehen, dass einige im Laufe der Zeit an den Außenseiten zerbrochen und, um einen Einsturz des Turms zu vermeiden, ausgewechselt worden sind.

Die Fortsetzung der Ausgrabung in diesem Bereich hat die Erforschung der Fundamentmauer der Südmauer des Turms 9 mit den entsprechenden Fundamentschichten

ermöglicht (Abb. 6: A). Diese Mauer besteht aus unregelmäßigen, unterschiedlich behauenen Bruchsteinen und ist bis zu einer Höhe von ca. 1,4 m freigelegt worden.²⁹

Die Fundsituation ist hier ähnlich zu jener bei Turm 5: Die Fundamentgrube wurde ausgehoben, um auf tragfähige Erdschichten oder den gewachsenen Fels zu gelangen und darauf die Fundamentmauer des Turms zu setzen. In diesem Zusammenhang, wie auch bei Turm 5, liegen die Steine der Fundamentmauer nahe an der Wand der Fundamentgrube. Die Ausgrabung der sehr engen Fundamentschicht sowie der zwei Straten, die von der Fundamentgrube geschnitten wurden, hat insbesondere einheimische ‚matt-painted‘-Keramik und Schwarzfirniskeramik ans Licht gebracht, die zwischen dem letzten Viertel des 6. und dem Anfang des 5. Jh. v. Chr. datiert werden können.³⁰ Besonders interessant ist dabei das Fragment eines Skyphos attischer Produktion, der zur ‚Witthe-Heron-Group‘ gehört. Diese Gruppe, die etwa um 500 v. Chr. datiert wird, ist in Sizilien zahlreich bezeugt (Abb. 7).³¹ Ein weiteres Fragment wurde auch im

²⁹ Die Ausgrabung der tiefsten Fundamentschichten ist in diesem Bereich aus statischen Gründen nicht durchgeführt worden.

³⁰ Zur einheimischen ‚matt-painted‘ Keramik s. zuletzt Biagini 2008.

³¹ Spatafora 2003, 309, 316 Abb. 267.13.



Abb. 6 Erice. Nordseite des Turms 9: A: Fundamentmauer der ersten Bauphase; B: Sockel der ersten Bauphase; C: Flickung der zweiten Bauphase; D: Maueraufriss der zweiten Bauphase (S. De Vincenzo).

Rahmen der früheren Ausgrabungen von Anna Maria Bisi an der Stadtmauer von Eryx gefunden.³²

Die Datierung dieses Fundkontextes um 500 v. Chr. bildet den *Terminus ante quem* für die Errichtung der Fundamentmauer der ersten Bauphase des Turms 9.

In einer zweiten Sondage wurde die Südseite des Turms 6 untersucht. Dieser Turm weist zwei Mauerreihen aus *Opus Quadratum* auf, welches zur zweiten Bauphase zu zählen ist. Der höhere Bereich des Turms besteht aus mittelalterlichem Mauerwerk. Bei diesem Turm besitzt die Fundamentmauer eine andere Struktur als im Falle der Türme 5 und 9 (Abb. 8: A). Hier besteht sie aus großen Quadern mit derselben Dicke und einer geraden, glatten Oberfläche. Die Zwischenräume der Quader der ersten Mauerreihe oberhalb der Fundamentmauer zeigen eine Füllung aus sehr kleinen, unregelmäßigen Steinen. Der östliche Teil dieser Mauer schneidet eine senkrechte

Mauer an, die aus zweischalig gesetzten, kleineren Steinen besteht und den Mauerabschnitt unmittelbar südlich des Turmes stützt (Abb. 8: A, C). Diese zwei Mauern waren von einer rund 60 cm tiefen Fundamentschicht bedeckt, die wegen ihrer stratigraphischen Position als Fundamentniveau des Mauerturms betrachtet werden muss. Die Keramik, die in dieser Schicht gefunden worden ist, kann deswegen Hinweise zur Chronologie der zweiten Bauphase liefern. Es handelt sich um wenige Fragmente, die vor allem der Grobkeramik zuzuordnen sind. Allerdings fanden sich auch einige Fragmente von Schwarzfirniskeramik, die in die erste Hälfte des 3. Jhs. v. Chr. datiert werden können. Diese Schicht bedeckt auch die Verlängerung der zweischaligen Mauer, deren Südteil höher ist als der Nordteil. Besonders bedeutend sind in diesem Zusammenhang zwei Steine (Abb. 8: E), die in einem rechten Winkel zur Mauer verlaufen. Angesichts der Orientierung dieser Quader könnte es sich hierbei um die Ecke einer älteren Baustruktur handeln. Diese Steine sind angesichts der Höhe der Fundamentmauer und des Verlaufs im rechten Winkel zur Stadtmauer als Turm zu interpretieren. Besonders interessant ist dabei die Bautechnik der Mauern des älteren Turms, die derjenigen der Fundamentmauer von Turm 9 ähnelt. Diese Beobachtung lässt eine Datierung des älteren Turms in die erste Bauphase der Stadtmauer vermuten.³³



Abb. 7 Schwarzfirniskeramik. Randfragment eines Skyphos der ‚White-Heron-Group‘ (S. De Vincenzo).

³² Bisi 1968, 288 Abb. 20b.

³³ Vgl. hierzu unten die ähnliche Fundamentmauer von Turm 9.



Abb. 8 Erice. Südseite des Turms 6: A: Fundamentmauer der zweiten Bauphase; B: Maueraufriss der zweiten Bauphase; C: Fundamentmauer der ersten Bauphase; D: Maueraufriss der zweiten Bauphase; E: Ecke des zerstörten der ersten Bauphase (S. De Vincenzo).

Im nördlichen Abschnitt, an der Schnittstelle zwischen Turm und Stadtmauer, lässt sich tatsächlich im Quadermauerwerk (Abb. 8: B, D) mit derselben Bautechnik wie die Mauer des Turmes 6 eine senkrechte Fuge ausmachen, die möglicherweise auf ein kleines Tor, eine Poterne, hinweist. Man kann also vermuten, dass im Zusammenhang mit der Zerstörung dieses Turms eine kleine Poterne gebaut wurde, als ein neuer Turm, der Turm 6, entstand. Diese Poterne wurde von der mittelalterlichen Bruchsteinmauer bedeckt.

Weitere wichtige Hinweise auf die Chronologie der zweiten Bauphase der Stadtmauer beziehen sich auf Turm 11, der mit einer Breite von ca. 10,6 m und einer Tiefe von 8,5 m der zweitgrößte Turm von Eryx ist. Darüber hinaus ist er der südlichste, der ein antikes Mauerwerk aufweist. Der heutige Zustand des Turms zeigt bis zum Gelniveau ausschließlich das Mauerwerk der mittelalterlichen Bauphase und keinerlei Spuren der antiken Bauphasen. Die Ausgrabung an der Nordmauer des Turmes, die bis auf eine Höhe von ca. 1 m freigelegt worden ist, hat ihr Fundament untersucht, das aber nicht vollständig abgetragen wurde. Die Fundamentmauer besteht im westlichen Teil aus drei zusätzlichen Steinreihen aus

regelmäßigen Quadern von unterschiedlicher Größe, wobei die unterste Mauerreihe nur im oberen Bereich sichtbar ist. Die mittlere Steinreihe zeigt zwischen den Quadern eine Füllung aus sehr kleinen, unregelmäßigen Steinen, wie diejenige der Fundamentmauer des Turmes 6. Grobbehauene Felsblöcke fanden sich nicht.

Für die Chronologie der Fundamentmauer ist das Fundmaterial der Fundamentschicht von Bedeutung. Dabei handelt es sich u. a. um Fragmente von Schwarzfirniskeramik, die in die erste Hälfte des 3. Jhs. v. Chr. datiert werden können.

Die Topographie der Stadtmauer

Ein veränderter Abstand der Türme und das Fehlen von Befunden älterer Bautechniken südlich des Turmes 11 bilden einen wichtigen Hinweis auf eine Zäsur in diesem Bereich der Stadtmauer. Die mittelalterliche Bautechnik des südlichen Bereichs der Stadtmauer lässt eine Errichtung der Mauer südlich des Turmes 11 erst im Mittelalter vermuten.

Betrachtet man die Nordseite des Berges, so ist aufgrund der Topographie festzustellen, dass ein militärischer Angriff nur an dieser flacheren Seite möglich war (Abb. 9). Daher wurde auch an dieser Stelle eine Stadtmauer mit entsprechendem Tor errichtet. Mauer und Toranlage konnten während eines Surveys im Sommer 2009 an den Hängen des Berges lokalisiert werden (Abb. 10). Die Bautechnik der Stadtmauer und des Tores aus mit Mörtel zusammengefügteten Bruchsteinen ist die gleiche wie bei allen mittelalterlichen Befestigungsmauern der Stadt und dürfte daher auch gleichzeitig sein. Es konnte ferner ein Weg ausgemacht werden, der vom Tor ausgehend ins Tal und bis zum Hafen Bonagia führte.

Lokale historische Überlieferungen für Eryx belegen neben den drei bekannten Toren ein viertes, ‚Porta Castellammare‘ genanntes Tor. Beim oben beschriebenen Tor könnte es sich durchaus um das überlieferte handeln, da es auch auf Castellammare del Golfo ausgerichtet ist.³⁴

Eine Sondage, die im Sommer 2010 durchgeführt wurde, hat die Fundamente der Stadtmauer neben diesem Tor untersucht (Abb. 11). Es konnte nachgewiesen werden, dass an die Stadtmauer nur eine ca. 25 cm dicke Humusschicht anlag und dass das Fundament direkt auf dem Fels errichtet wurde. Spuren einer älteren Bauphase konnten nicht nachgewiesen werden. Der stratigraphische Kontext ist aber in diesem Bereich anders als bei den Türmen auf der Westseite der Stadt, wo die Fundamentniveaus ca. 2 m tief sind. Hier dagegen reichen diese nur in eine Tiefe von 25 cm. Der Fels ist in diesem Bereich nur von einer dünnen Erdschicht bedeckt, weshalb die vorherige Bauphase komplett zerstört worden sein könnte. Daher kann man nicht davon ausgehen, dass die Befestigungsmauer hier erst im Mittelalter errichtet worden ist.

Angesichts der Topographie wäre ein alter Mauerverlauf in diesem Bereich allerdings sinnvoll. Es handelt sich um einen exponierten Sektor des Hanges mit einer niedrigen Steigung. Außerdem ist die Errichtung einer Befestigungsmauer in diesem Bereich sehr rationell, da sie sich im engsten Teil des Hanges zwischen zwei Felsvorsprüngen befindet. Dieses Gebiet kann aller Wahrscheinlichkeit nach auch während der vorrömischen und römischen Phase nicht unbefestigt gewesen sein, da dieser exponierte Hang sowie die Straße zum Bonagia-Hafen immer geschützt gewesen sein müssen.

Diese Annahme würde auch auf einen Mauerverlauf von Turm 1 bis zum ersten Felsvorsprung, also unterhalb der Linie von drei Gebäuden des 15.–17. Jhs., schließen lassen. Von hier müsste sich der Mauerverlauf mit dem Mauerabschnitt von der Porta Castellammare nach Norden bis zum zweiten Felsvorsprung fortgesetzt haben.

Wenn diese Hypothese im Laufe der zukünftigen Forschungen bestätigt werden sollte, hätten wir eine bedeutende Ausrichtung zwischen dem nördlichsten Felsvorsprung und dem Turm 11 erfasst, dem letzten Turm mit antiken Bautechniken im Vergleich zu den südlichsten, die außerdem eine geringere Größe aufweisen.

Genau zwischen diesem Felsvorsprung und dem Turm 11 ist eine auffallende Anomalie im Straßensystem der mittelalterlichen Stadt zu beobachten (Abb. 12). Die Straße, die zwischen der heutigen Piazza Vittorio Emanuele I und der Piazza San Domenico verläuft, bildet eine deutliche Zäsur zwischen zwei Bereichen. Derjenige, der nordöstlich dieser Straße liegt, ist von parallelen Straßen durchzogen, der südliche dagegen weist unregelmäßige Straßenverläufe auf. Außerdem gehen von dieser Straße weitere Straßenzüge ab, die Hinweise auf frühere Stadttore oder Poternen geben können. Die Straße könnte sich also entlang dem alten Südmauerverlauf entwickelt haben.

In Anbetracht dieser vorläufigen Beobachtungen kann man vermuten, dass das antike Eryx kleiner war als das heutige. Die antike Stadt hatte demnach eine Größe von ca. 3 Hektar. Die künftigen Ausgrabungen an den Fundamenten der Türme südlich von Turm 11 sowie im Bereich der Porta Castellammare werden diese vorläufigen Hypothesen überprüfen.

Abschließende Betrachtungen

Die Errichtung der ersten Bauphase der Stadtmauer von Eryx kann aufgrund der Auswertung der Funde aus den Fundamenten der Türme am Anfang des 5. Jh. v. Chr. angesetzt werden. Es handelt sich um eine bedeutende Phase von Eryx, in der auch die erste Münzprägung belegt ist.³⁵ Diese Neuerung könnte, zusammen mit der Errichtung der Stadtmauer, ein Hinweis für eine erste Strukturierung der Stadt als Polis sein. Wegen dieses

³⁴ Zu den antiken Toren von Eryx s. Castronovo 1872, 5–6; De Vincenzo 2010, 38–9.

³⁵ Zu den ersten Münzprägungen von Eryx s. De Vido 1989, 355; Tusa Cutroni 2010, 63–4.

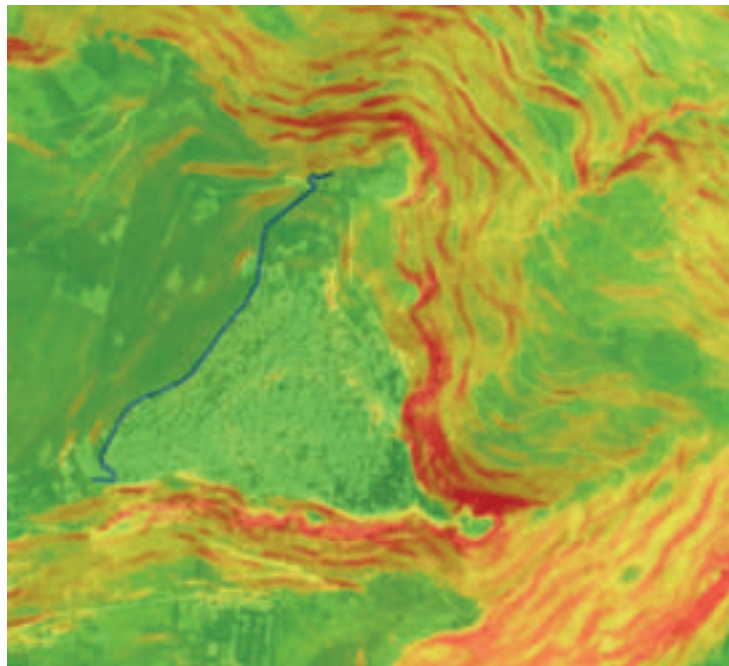


Abb. 9 Eryx. Plan der Steigungsniveaus: grün: niedriges Niveau; gelb: mittleres Niveau; rot: hohes Niveau (P. Borrelli).



Abb. 10 Erice. „Porta Castellammare“ (S. De Vincenzo).



Abb. 11 Erice. Sondage an der ‚Porta Castellammare‘ (S. De Vincenzo).

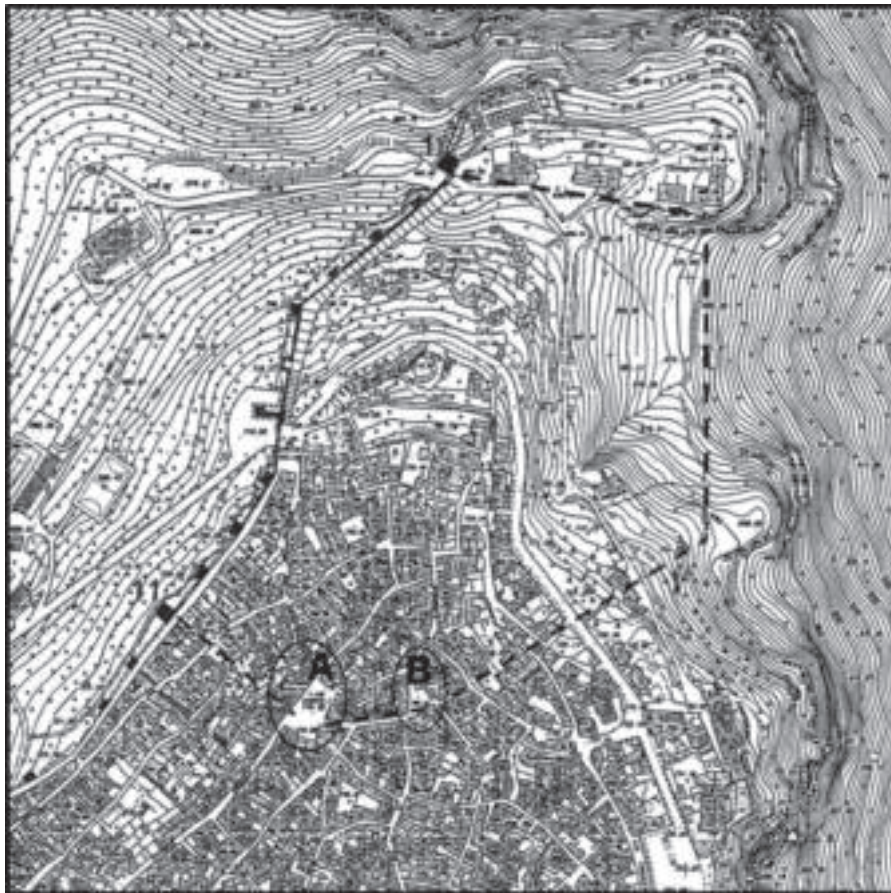


Abb. 12 Rekonstruktion des Umrisses des antiken Eryx. A: Piazza Vittorio Emanuele I; B: Piazza San Domenico (S. De Vincenzo).

Ergebnisses sollte die bisherige Datierung der ersten Bauphase in das 4. Jh. v. Chr. abgelehnt werden, die auf der Basis der Textstelle von Diodor vorgeschlagen worden ist.³⁶ Bezüglich der zweiten Bauphase haben die neuen Untersuchungen bewiesen, dass diese in die erste Hälfte des 3. Jhs. v. Chr., datiert werden kann. Diese Umstrukturierung der Stadtmauer könnte im historischen Kontext des ersten punischen Kriegs eingeordnet werden.³⁷

Die neuen Ergebnisse zum Verlauf der Stadtmauer an der Nordostseite der Stadt, aus denen hervorgeht, dass die antike Stadt kleiner als die moderne war, werfen auch auf die archäologischen Ergebnisse der westlichen Stadtmauer ein neues Licht. Diese Betrachtungen führen zu dem Schluss, dass die antike Stadt Eryx nur auf der Westseite zwischen den Türmen 1 und 11 befestigt war.

Die Ausdehnung der Stadt an der Nordseite des Berges ist nicht zufällig; diese Seite ist dem Meer zugewandt und wegen der niedrigen Steigung einfacher zu erreichen. Genau unterhalb der Altstadt liegt noch heute der kleine Hafen von Bonagia, der vermutlich dem alten Hafen von Eryx entspricht. Das Gebiet zwischen der Stadt Eryx und dem vermutlich dazugehörigen Hafen soll Gegenstand von zukünftigen Forschungen sein.

Die hier postulierte, kleinere Ausdehnung der antiken Stadtanlage hat zur Folge, dass die Burg außerhalb der Stadt lag und damit auch das Aphrodite-Erykina-Heiligtum, welches unterhalb der Burg vermutet wird. Eine extraurbane Lage dieses Heiligtums ist durchaus vorstellbar, vor allem auch in Anbetracht der überregionalen Bedeutung dieser Gottheit. Sie war nicht nur höchste Göttin und Hauptgottheit von Eryx, sondern des gesamten Koinon der Elymer. Eine Textstelle bei Polybios kann diese Vermutung bestätigen, da der Autor den Tempel auf der Bergkuppe und die Stadt auf einer niedrigen Anhöhe lokalisierte.³⁹

Zusammenfassend ist festzuhalten, dass sich die Stadtanlage des antiken Eryx auf die südliche Spitze der Bergkuppe konzentrierte und auf das elymische Territorium sowie auf den Hafen Bonagia ausgerichtet war. Darüber hinaus lag sie auf dem Weg zum Heiligtum der Aphrodite Erykina, deren Prestige und wichtige politische und religiöse Bedeutung eng mit Eryx verknüpft waren.

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³⁶ Diod. Sic. 14.48.1.

³⁷ Zu den Umstrukturierungen von Befestigungsmauern in Sizilien im Rahmen des ersten punischen Krieges s. De Vincenzo 2012, 159–60.

³⁸ Plb. 1.55.8–9. Zum Koinon der Elymer s. Consolo Langher 2000.

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ABOUT THE MEANING OF FORTIFICATIONS IN LATE ANTIQUE CITIES: THE CASE OF ATHENS IN CONTEXT*

Isabella Baldini & Elisa Bazzechi

Abstract

Like many other centres in Greece and elsewhere in the Roman Empire, Athens strengthened its fortifications in the 3rd century AD in the face of the barbarian threat. Later the city received a reduced wall circuit that included only a small part of the previous urban area. The construction of reduced enceintes in Greece and elsewhere in the Roman Empire appears to be a typical phenomenon of the Late Antique process of fortification. But the dating of these circuits has often been too simplistically connected with barbarian attacks without considering the relationship between the walls and the contemporary development of the cities in question.

This contribution seeks to analyse the fortification of various Greek cities between the 3rd and the 6th century AD. Given the religious significance of the Acropolis of Athens, which is included within the reduced wall circuit, the fortification of other Greek sanctuaries will also be taken into account. The examples considered here derive from various Greek provinces (*Achaia*, *Macedonia*, *Epirus vetus*, *Epirus Nova*). Each case will be studied in context by taking into account its geographical and strategic position, its significance within the imperial system, and the relationship between urban area and Late Antique circuits. A comparison with these cases will then hopefully lead to a better understanding of the Late Antique fortifications of Athens.

Preliminary remarks

The chronological problem of the 'internal' or 'post-Herulian' walls of Athens is still of topical interest, despite many years of scholarly attention.¹ In the last few years, the archaeological investigations of the 1st

Ephorate of Prehistoric and Classical Antiquities in the Roman Agora and at the northern slopes of the Acropolis have added important data to the scientific debate. The results of such important research have been discussed recently (June 2012) during a seminar organized in Rome by the University 'La Sapienza', in the context of a wider

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¹ Sections 1 (Preliminary remarks) and 3 (The fortified sanctuaries) were written by Isabella Baldini and section 2 (The cities) by Elisa Bazzechi. The final section (The case of Athens) is the result of a common discussion. Curtius 1891; Graindor 1915; Guidi 1921–2, 33–54; Mitsos 1970; Catling 1979–80, 7; Lawrence 1983, 172; Frantz 1988, 125, 141; Catling 1988–9, 9; French 1990–1, 7; Baldini Lippolis 1995; Castrén 1994; Di Branco 2006.



Fig. 1 Plan of Athens in the 5th century AD (Frantz 1988).

debate on the development of the town between the Antiquity and the Byzantine period.²

We shall not consider here the *vexata quaestio* of the stratigraphic reliability of the discoveries which were used for dating the Athenian internal walls (Figs 1–3):³ such interpretation, which has strongly conditioned the historical reconstruction of the post-Classical town, will be discussed in a more exhaustive way in a publication about Late Antique Athens, which is now in preparation.⁴ We wish to offer only a few general reflections on the

theme of Late Antique fortifications, considering a number of settlements in a homogeneous geographical and political region, as a contribution to a wider analysis of the Athenian situation.

This article will analyse the following cities: Thessaloniki, Edessa, Philippi, Dion, Corinth, Nikopolis and Dyrrachium. They belong to the same province as Athens, *Achaia*, but also to *Macedonia*, *Epirus vetus* and *Epirus Nova*. We have chosen these cities with the intention of drawing as diversified as possible a picture of the Greek provinces.

² The acts of the seminar have been published by L. Calì, E. Lippolis and V. Parisi (eds.) in 2014. New results from recent excavations have been offered, in particular, by Dimitris Sourlas and Nikolaos Tsoniotis. Sourlas reported about the excavations under the hotel Aiolos at the Plaka and the discovery of a section of the Library of Hadrian's southern precinct wall, a part of the core and a massive pillar of a gate of the post-Herulian wall and a part of large late antique building, probably a bath. S. Sourlas 2014. Tsoniotis reported about the excavations in the northern section of the eastern colonnade of the Roman Agora and its different phases from the Late Antiquity to the period of the Turkish domination. The recent excavations in the Roman Agora provided also new stratigraphical data for the date of the Byzantine basilica at the end of the 7th or beginning of the 8th century. S. Tsoniotis 2014.

³ Frantz 1988, with references.

⁴ The volume will be edited by I. Baldini & E. Bazzechi.



Fig. 2 Plan of the post-Herulian wall of Athens (Frantz 1988).

In each province these cities play different roles: some are provincial capitals (Thessaloniki, Corinth, Nikopolis, Dyrrachium), others are relevant for their strategic position (Philippi, Edessa).

Furthermore, considering the importance of the urban area incorporated into the Athenian walls from a religious point of view, we will also consider some important sanctuaries: Eleusis, Epidauros and Olympia. The aim is to enhance the importance of the contextual aspects, undoubtedly very significant in the comprehension of the Athenian defensive apparatus, through a general reflection on the system and on the mentality of enclosing Late Antique settlements.



Fig. 3 Western section of the post-Herulian wall of Athens (author's photo).

The cities

Thessaloniki was the provincial capital of *Macedonia* and the seat of the praetorian prefecture of *Illyricum* after the reforms of Diocletian.⁵ The city derived its strategic significance from its placement on the Via Egnatia, the main land route between Italy and Constantinople.⁶ Thessaloniki played an important role for the central power and, as such, attracted the attention of many emperors. Galerius chose the city for his residence and built a huge palace; Constantine the Great and Theodosius I visited it repeatedly.⁷ The town was constantly threatened by barbarian tribes, crossing the Danube frontier and ravaging the Roman territory from the 3rd century onwards.⁸ It resisted their attacks in AD 254 and 268 and thanks to its strong walls the town did not fall victim to later barbarian attacks. Its fortifications have been studied by J.-M. Spieser and by G. Velenis,⁹ who has tried to recognize the different construction-phases from the Hellenistic to the Byzantine era. During the period we are interested in the walls of Thessaloniki were restored and strengthened many times. In the 3rd century before the attacks of the Goths and the construction of the Galerius' palace the Hellenistic walls¹⁰ were enlarged to include the southernmost part of the city which had developed

⁵ The seat of the prefecture was originally in both Sirmium and Thessaloniki, but after AD 441 only in Thessaloniki; Adam-Veleni 2003, 168–72.

⁶ About the Via Egnatia in general: Fasolo 2005.

⁷ Adam-Veleni 2003, 168–72.

⁸ Adam-Veleni 2003, 162; Zahrnt 2010, 104–9.

⁹ Spieser 1984, 27–80; Velenis 1998, who dates the different phases on the base of the construction techniques and historical events. Unfortunately we lack evidence from ceramics or coins that could help to strengthen Velenis' conclusions.

¹⁰ Velenis thinks that there were also some repairs to the Hellenistic walls in the early Roman times. Velenis 1998, 43–4.

in the Roman era. The 3rd-century walls were built in a technique quite frequently found in the Balkans:¹¹ *opus mixtum*, stones bonded with mortar interspersed with bands of brick levelling courses. Older materials such as architectural elements, bases or inscriptions were also frequently re-used.¹² The 3rd-century walls underwent many repairs in the following centuries (i.e. from the 4th to the 7th centuries AD) but their circuit remained intact.¹³ In the middle of the 7th century its wall was 7 km long, 5 m thick on average and included an urban area of 260 ha.¹⁴ Velenis associates many of these works with the presence of the emperors in Thessaloniki, in particular Galerius and Theodosius, and with their direct action. This association is probable, but what is really interesting is the question of what consequences the role of Thessaloniki within the imperial system had for the development of the city and its fortification in Late Antiquity. In this period Thessaloniki was bigger and more populated than in Hellenistic and Early Roman times. Its walls were longer than the Themistoclean walls in Athens (6.5 km), but even though Thessaloniki suffered more frequent barbarian attacks than Athens, its walls were not too long to be defended. This was the result of the continuous protection of the city provided by the imperial authorities.

Edessa and Philippi were two cities of the province of Macedonia along the Via Egnatia. Due to their position they were prosperous in Roman and Late Antique times, as can be seen for example in the monumentality of the forum and of the early Christian churches of Philippi.¹⁵ Although it does not seem that these cities suffered directly from barbarian attacks, the common threat pushed them to repair their Hellenistic fortifications in the 3rd century AD. At Edessa the old circuit was repaired throughout



Fig. 4 Plan of Philippi (Provost 2001).

its course¹⁶ with the wall having two curtains and an average thickness of 2.10 m. The curtains were largely built with re-used materials, mostly taken from cemeteries. The blocks were bonded with mortar, and bricks filled the spaces between them.¹⁷ The core was of rubble and mortar. The fortification had quadrangular towers. The construction of these walls is dated on the basis of the re-used materials, in particular the inscriptions, which date no later than the 3rd century AD.¹⁸ In Philippi the Hellenistic circuit was also repaired along its length (approximately 3.5 km) (Fig. 4).¹⁹ The walls were built in *opus mixtum*, with intervening bands of five brick levelling courses. The repairs to Philippi's fortifications date from the end of the 3rd to the beginning of the 4th century AD on the basis of their stratigraphic relationships with the last phases of the theatre.²⁰ It is interesting to observe that the circuits of both Edessa and Philippi received a *proteichisma*, probably in the 6th century.²¹ The addition of the *proteichisma* suggests that the restored Hellenistic

¹¹ This technique was adopted in the same period in Dion and Philippi and later in Thessaloniki, Nikopolis and Stobi. For Philippi and Dion see below. For Stobi see Saržovski 1975, 229–34.

¹² See for example Claudianos' tower, Spieser 1984, 64 and Velenis 1998, figs 31, 74.

¹³ In the first half of the 4th century new quadrangular towers and a strengthening wall against the interior curtain were built. At the end of the century a new wall with triangular towers was added to the outer face of the 3rd-century circuit. Other strengthening works followed in some sections of the walls in the middle of the 5th century and under the Emperor Heraclius: Velenis 1998, 107–35.

¹⁴ Velenis 1998, 173 and fig. 99.

¹⁵ For Edessa in Roman times see Papazoglou 1988, 127–31; Chrysostomou 2008; Zahrt 2010, 93. For Philippi see Papazoglou 1988, 404–13; Koukouli-Chrysanthaki 2009; Zahrt 2010, 84–8, 115–17.

¹⁶ Chrysostomou 1987, 161–9. The entire course of the walls in Edessa is not known. From the plan it can be estimated that the excavated sections measure around 1.6 km in total. See Chrysostomou 1987, drawing 1.

¹⁷ See Chrysostomou 2008, figs 88–9.

¹⁸ Chrysostomou 1987, 167. Many inscriptions re-used in the walls come from the sanctuary of Ma. Hatzopoulos supposed that these inscriptions could have been used as building materials only after the destruction of the sanctuary that she associates with the Herulian attack in AD 267. See Hatzopoulos 1988, 441–2.

¹⁹ Provost 2001, 123–35.

²⁰ Provost 2001, 133. A section of the wall passes near the theatre and has been studied during the excavations of the same monument.

²¹ For the *proteichisma* in Edessa coin finds suggest a *terminus post quem* for its construction in the 5th or 6th centuries AD: Chrysostomou 1990, 159–60. The *proteichisma* in Philippi is dated on the basis of a comparison with the *proteichisma* of Thessaloniki: Provost 2001, 134.



Fig. 5 Plan of the reduced enceinte of Dion in its relationship with the Hellenistic and 3rd-century wall (Stefanidou-Tiveriou 1998).

circuits were seen as adequate to protect the cities until at least the 6th century AD. In Edessa and Philippi there was no perceived need to build a reduced wall circuit, and no evidence for any reduction in the size of these

cities. Although they did not play such an important role in the Roman Empire as Thessaloniki, their position on the Via Egnatia not only favoured their development but probably encouraged the central power to take care of their defence.²² There is no evidence that these two cities fell victim to barbarian attacks before the 7th century AD.²³

Dion was a city in the province of *Macedonia*, which, although it did not have a strategic position like Edessa and Philippi, enjoyed a certain prosperity in the Roman era.²⁴ Its decayed Hellenistic walls were repaired during the 3rd century AD. The new circuit (2.58 km long) mostly followed the course of the old one.²⁵ The walls had two curtains in *opus mixtum* with quadrangular towers and featured extensive re-use of old materials.²⁶ These repairs are dated to the middle of the 3rd century.²⁷

After the 3rd-century wall had fallen into decay,²⁸ in the last quarter of the 4th century AD a new circuit (1.59 km) was built (Fig. 5),²⁹ including only a small part of the 3rd-century city (16 of the 37 ha included before). The technique of the new walls differed from that of the 3rd-century ones only in the less frequent use of brick courses and in its reduced thickness.³⁰ The circuit included within it the agora, the major bath-complex, and the cathedral, the first phase of which is contemporary with the new walls.³¹ The residential district with the House of Dionysos and a building, which has been interpreted as the *praetorium*, were left outside.³² The author of a

²² The presence of troops in Edessa is supposed also in Chrysostomou 2001, 300.

²³ In Edessa archaeological excavations have not found traces of destruction before the 7th century AD. Archaeologists have found destruction debris in front of the southern gate of the walls that they connect with the attacks of the Slavs: Chrysostomou 1990, 160. A reduction of the populated area on the Acropolis is supposed from the 7th century, although the first reference to it appears only in the literary sources of the 11th century: Chrysostomou 1990, 160. Philippi seems also to have resisted the attacks of the Goths at the end of the 5th century AD. The destruction of its forum and early Christian churches is connected with an earthquake in AD 618. There is no concrete evidence for the gradual reduction of its populated area: Provost 2001, 134–5.

²⁴ For Dion see Papazoglou 1988, 108–11; Pandermalis 1987; Pandermalis 1997; Zahrnt 2010, 88–91, 118. In Dion the residential quarter, where the House of Dionysos is, shows the presence of elites in the city in the 2nd and 3rd centuries. Unfortunately, the lack of extensive archaeological research across most of the Roman city and the silence of the literary sources make it impossible to draw a full picture of Roman Dion.

²⁵ On the eastern side the frequent flooding of the river forced the line of the fortification to be moved back. Stefanidou-Tiveriou 1998, 157–97.

²⁶ See Stefanidou-Tiveriou 1998, figs 117, 133.

²⁷ The date of repair lies between two *termini*: the re-use of a Severan sculpture in the walls represents the *terminus post quem*, while coins of AD 270–83 found in the levels of abandonment of one tower act as a *terminus ante quem*. Stefanidou-Tiveriou 1998, 183–97.

²⁸ Probably because of the period of peace: Constantine the Great had made a peace treaty with the Goths in AD 332.

²⁹ Stefanidou-Tiveriou 1998, 198–215 and figs 155–7. The coins found in the foundation trench of the walls indicate a *terminus post quem* for their construction of AD 364–75. An alternative interpretation of the Late Antique fortification's chronology has been established by Mentzos, although it does not convince us. Mentzos does not see any differences between the two restoration phases indicated by Stefanidou-Tiveriou on the south and west sides of the Hellenistic walls. He thinks that the Hellenistic walls underwent only one repair in the 4th century AD and that the reduced wall circuit was built in the 7th century AD, because its technique is similar to that of the cemetery basilica which is dated to this period: Mentzos 2002, 333–41.

³⁰ The 4th-century walls are 1.90 m thick, the 3rd-century wall is 2.10 m thick: Stefanidou-Tiveriou 1998, 200.

³¹ See Stefanidou-Tiveriou 1998, drawing 4.

³² For the building interpreted as the *praetorium* see Pandermalis 2001, 99–107.

study of the walls of Dion, Theodosia Stefanidou-Tiberiou, supposes a contraction of the population, who would now have been concentrated in the safer south-western part of the former city. Archaeological research has shown that Dion suffered an earthquake in the 4th century AD, which caused considerable damage to its sanctuaries. This may also have caused a decrease in population but the lack of archaeological investigation across a large part of the Roman city does not allow any estimate of the extent of the inhabited area.³³ Strategic reasons could also explain the construction of the reduced circuit at the end of the 4th century, when the Gothic threat was present again.³⁴ The new walls may have been intended to protect the centre of the city, and to be more easily defended by a limited number of soldiers. The possibility of using sections of the 3rd-century walls for the new fortifications could have played a role in determining the new fortification's course.³⁵ The fact that Dion does not seem to have suffered direct barbarian attacks and its less important strategic position makes it difficult to think that the imperial authorities were prepared to invest substantial resources to defend it.

Let us now turn our attention to the capital cities Corinth, Nikopolis and Dyrrachium. Recent archaeological research in Corinth has shown that the city suffered its first barbarian attack in AD 396.³⁶ The Late Antique wall circuit was built on destruction debris dating to the end of the 4th century. For this reason Gregory has argued that the walls were built in the first two decades of the

5th century.³⁷ The circuit was built with a double-curtain wall and made extensive use of re-used materials both in its facings and its core.³⁸ The new walls included only the central part of the previous city with the forum.³⁹ Gregory has suggested that the Late Antique fortification of Corinth had a strategic function, protecting the offices of the governor of the province of *Achaia*. These would have been part of the forum complex and could be defended more easily due to its limited dimensions.⁴⁰ Even if archaeological evidence indicates that life in 5th-century Corinth was not restricted to the intra-mural area, the construction of the reduced circuit marks important urban transformations. As Eric Ivison has observed, the new walls left some areas outside that were destroyed and occupied by tombs at the end of the 4th century.⁴¹ On the other side they seem to influence a redefinition of the burial areas, now organized around cemetery basilicas, as in the case of the Kraneion Basilica, built in the late 5th or early 6th century outside the Late Antique walls.⁴²

The wall circuit at Nikopolis was also reduced, probably at the end of the 5th century.⁴³ With the exception of the settlement of the Goths in Epirus at the very beginning of the 5th century, the barbarian threat did not become more serious for the provinces on the Adriatic Sea until the second half of the 5th century.⁴⁴ Nikopolis was temporarily captured by the Vandals in AD 474 and this may have encouraged the construction of a reduced wall circuit (2 km long).⁴⁵ It has two curtains in *opus mixtum* and a core of rubble stones and mortar (Fig. 6).⁴⁶ The

³³ Dion seems to have suffered the ruinous consequences of two earthquakes: in the 4th and in the first half of the 5th centuries AD, but rich houses with mosaic pavements of the 4th century AD are still known in the southern part of the city. The Roman theatre underwent some restoration in the last quarter of the 4th century AD. Some buildings on the agora and the northern part of the House of Dionysos seem to have Late Antique phases that unfortunately cannot be dated. It would be very interesting to know the period of use of the building interpreted as the *praetorium* that has been excavated on the main road of the city near the House of Dionysos and that was left outside the reduced wall circuit. The inadequacy of our knowledge about the Late Antique phases of many buildings and, especially, the lack of chronological indicators makes it very difficult to follow the development of the city in Late Antiquity and the relationship between fortification and urban surface.

³⁴ Some authors have pointed out that the construction of reduced wall circuits in Late Antiquity does not need to be explained through a decrease in urban populations, but could be explained by strategic reasons. A reduced circuit can be defended more easily, and by fewer soldiers. See for example Roblin 1965; Gregory 1982; Johnson 1983; Crow 2001; Kirilov 2007; Sodini 2007. For a different point of view see Müller-Wiener 1986.

³⁵ This is also supposed by Hellenkemper in case of Nikopolis, see below.

³⁶ Many destruction levels that in the past had been assigned to the Herulian attack of AD 267 have recently been redated to the end of the 4th century and associated with the attack of the Alaric's Goths in AD 396; Gregory 1979.

³⁷ Gregory 1979, 269–71.

³⁸ See Gregory 1979, pls 76–8.

³⁹ See Gregory 1979, fig. 1.

⁴⁰ Gregory 1979, 278.

⁴¹ Ivison 1996, 103.

⁴² Ivison 1996, 103.

⁴³ Hellenkemper 1984, 243–51; Gregory 1984; Wozniak 1984.

⁴⁴ Zahrnt 2010, 104–9.

⁴⁵ Hellenkemper 1984, 248.

⁴⁶ They have a thickness of 2.60 m and are equipped with quadrangular, semi-circular and polygonal towers.



Fig. 6 Late Antique walls of Nikopolis (author's photo).

walls are dated to the end of the 5th century on the basis of the re-use within them of architectural elements of Theodosian date⁴⁷ and by comparison with the 5th-century phase of the walls of Thessaloniki.⁴⁸ The Late Antique circuit included only the north-eastern area, and encompassed around 1/6 of the earlier Roman city (Fig. 7). From the 3rd century many buildings inside the city seem to have been abandoned, as the great amount of *spolia* used in the repairs of the walls testifies.⁴⁹ The Roman cemeteries lying outside the main gates of the Augustan walls remained in use only until the late 3rd or beginning of the 4th century AD.⁵⁰ The Late Antique walls included an area where important Roman and Late Roman public buildings stood, that were in part destroyed and in part converted to Christian use.⁵¹ Our knowledge of Late Antique Nikopolis is still too incomplete especially regarding the residential districts and the cemeteries. For this reason it is not possible to follow the development of the city fully. But we know, significantly, that at least

one of the Late Antique cemeteries near the Basilica Δ, was situated outside the Late Antique fortification but inside the Roman walls.⁵² The construction of the Late Antique walls seems to be the consequence of urban transformations that involved the abandonment of large areas of the Roman city and were intended to protect the public and religious centre in accordance with new military needs and a new conception of the intra-mural area. Inside the Late Antique walls there is no place for residential housing. Hellenkemper thinks that the construction of the walls of Nikopolis belongs to a unitary project that could have been promoted by the imperial power and realized by an imperial engineer.⁵³

The capital of the province of *Epirus Nova*, Dyrrachium, had a strategic position at the head of the Via Egnatia on the Balkan side.⁵⁴ The city fell victim to barbarian attacks in AD 459 and 479. In approximately AD 500 the city received an impressive wall circuit, 2 km long, entirely

⁴⁷ Hellenkemper 1984, fig. 8.

⁴⁸ Hellenkemper 1984, 248–9. Hellenkemper would not date the walls before the attack of AD 474, since Nikopolis would otherwise have been able to escape capture.

⁴⁹ The Odeion is one of these buildings. It seems to have gone out of use not long after the last repairs in the 2nd to 3rd centuries AD, so probably in the 3rd century AD: Chrysostomos & Kefallonitou 2001, 26. The house of Manius Antoninus, which lies directly west of the Late Antique circuit walls remained in use until the end of the 4th century. In its baths 5th-century pottery was found, suggesting that at least this section of the house remained in use until this period: Zachos 2008, 170; Zachos 2010, 145.

⁵⁰ Zachos 2010, 139–45.

⁵¹ Remains of Late Roman buildings have been found under Basilica A. A large complex with a peristyle court, interpreted as the residence of a Roman magistrate, was converted into the bishop's palace. Andreou considers the area where the *cardo maximus* met the *decumanus maximus* as the location of the agora of the Roman city and the later churches. This hypothesis is strengthened by the discovery of many dedicatory inscriptions to the emperors in this area and would help to explain the course of the Late Antique walls: Andreou 2007, 245–6.

⁵² Chalkia 2007, 659–66.

⁵³ Hellenkemper 1984, 250.

⁵⁴ Fasolo 2005, 136–45; Zahrnt 2010, 97–9.



Fig. 7 Plan of Nikopolis (Chrysostomos & Kefallonitou 2001).

built of bricks.⁵⁵ This huge financial investment can be explained by the important position of the city, but is likely to be connected to the emperor Anastasius, who was born in Dyrrachium, and whose monogram appears on tile-stamps from the walls.⁵⁶ Our archaeological knowledge of the Roman city is unfortunately too limited to allow its relationship with the Late Antique walls to be adequately understood. Some buildings excavated outside the north line of the fortification seem to suggest a shift of the city-centre towards the south during Late Antiquity, which could be attributable to changing sea-levels.⁵⁷

To sum up on the basis of the examples presented and before comparing them with the case of Athens, the first factor to be considered is the barbarian threat, which led to a general repair of existing wall circuits in the 3rd century. Most of the cities here considered are involved in this process (Dion, Edessa and Philippi). The restoration of the walls in the 3rd century does not have to be directly linked to a barbarian sack, therefore, but can have been motivated by general feelings of fear

and insecurity. In the 3rd century we do not have cases of reduced wall circuits. Among the cities considered Dion is the first to have received a reduced circuit, at the end of the 4th century. It is followed by the provincial capitals Corinth and Nikopolis during the 5th century.⁵⁸ To explain the creation of reduced city walls in terms of a dramatic contraction of the population is difficult. We would need to suppose that the population of Dion was halved within 100 years, or that Edessa and Philippi were more populated than the provincial capitals Nikopolis and Corinth.⁵⁹ I would like to stress another factor that must have played an important role in the Late Antique fortification of the Greek cities: their strategic significance within the imperial system. The vast expanse of the Empire and the existence of many problematic frontiers made the defence of Roman territory difficult in Late Antiquity.⁶⁰ The central powers did not have enough resources to secure the adequate defence of every city of the Empire and had to concentrate on some strategic points, which in our cases are represented by the cities on the Via Egnatia. The importance of imperial interests is evident in the case

⁵⁵ Gutteridge 2001, 396–402 and figs 10–11. New excavations north of the Late Antique fortification have found another line of walls that could belong to the Roman era. It also seems that this line had a Late Antique phase that could be contemporary with the circuit of Anastasius. The supposition that Dyrrachium was walled by a triple crown, as stated by John of Antioch in AD 610 (*FHA* IV, 621) deserves further attention: Gutteridge 2003, 375.

⁵⁶ Gutteridge 2001, 397.

⁵⁷ Gutteridge 2001, 407. According to the new excavations that discovered the northernmost line of defence, it is not certain that the Late Antique city was mainly concentrated in the area of the amphitheatre: Gutteridge 2003, 375.

⁵⁸ The case of Dyrrachium may not be a reduced circuit: Gutteridge 2003, 375.

⁵⁹ Such a reduction in population seems hard to believe, for example in the case of Nikopolis, where many lavish churches were built inside the Late Antique walls, showing its importance as a Christian centre.

⁶⁰ Goldsworthy 2003, 200–14; Whitby 2007, 135–61.

of Dyrrachium: the city seems to have received a new circuit as a result of specific imperial concern. Corinth and Nikopolis were provincial capitals, but *Achaia* and *Epirus vetus* were probably not considered to be of great political or strategic importance.⁶¹ It is also true that the barbarian raids in *Achaia* were quite limited and that they became more frequent in the *Epiri* only at the end of the 5th century. This would explain why these cities received reduced wall circuits, more or less 2 km long, which could be defended with limited resources. As for the courses of these enceintes, geological reasons could have had an influence, as in the case of Dyrrachium. Practical considerations, as for example the possibility of re-using sections of the old walls in the new circuit, could also have been relevant, as in Dion and Nikopolis. But the aim to protect pre-existing buildings must have played the biggest role. As Hellenkemper points out for Nikopolis,⁶² it is important to keep in mind that the imperial power had close control over the fortification of the cities inside the Empire. From this point of view it makes sense that the walls were designed to include the seats of the local representatives of imperial power. These could have been in the forum, as at Corinth or Dion, or nearby, as was probably the case in Nikopolis.

The considered cases show two substantially different processes of fortification: in the 3rd century the existing walls were considered to be adequate for the defence of the cities, whereas later new strategic necessities entailed to the construction of wall circuits that reflect Late Antique urban transformations and a new perception of intra-mural surface.

The fortified sanctuaries

In terms of the problem being examined here, it is also important to take fortified sanctuaries into consideration, because of the importance of these complexes both from a religious and social point of view. They are in fact settlements with completely different features from

those of the cities, because of the sacred character of their monumental development and attendance.

A first example can be seen in the sanctuary of Eleusis,⁶³ where a new boundary wall was built using *spolia*, in accordance with well-known post-Antique construction practices (Fig. 8). Its western walls, preserved to some height, joined the southern acropolis slopes with the Propylaeum, the façade of which was closed by a wall in which a new access door was opened. So the new fortification, less extensive, definitively excluded the western area of the sanctuary with the 'Houses of the priests', which had still been in use at least until the 3rd century AD.⁶⁴

The chronology of the Late Antique walls of Eleusis is still under discussion. The traditional hypothesis is that they were built before the Herulian attack:⁶⁵ Kevin Clinton has instead suggested that they were built after the raid of AD 267, but his proposal mostly depends on the chronology proposed for the Athenian fortification.⁶⁶ Without a detailed analysis of the *spolia*, an attribution to the 3rd century seems quite hazardous, especially considering the recent scientific debate on the chronology of other Greek fortifications: for a long time a number of these had been assigned to the decades before or after the Herulian raid, before further research dated them to a later period, as in the cases of Corinth and Sparta.⁶⁷

The construction of the Eleusinian fortifications must instead be related to the abandonment of a district which had been frequented at least until the 3rd century, considering for example the chronological development of the 'Houses of the priests': the abandonment of this quarter is probably connected with a reduced need for habitations for the Eleusinian priesthood, which fell into a definitive crisis during the second half of the 4th century.⁶⁸

Another observation concerns the marked respect shown to the buildings within the sanctuary, which do not seem to have been despoiled to obtain building material. On

⁶¹ Wozniak 1984, 265.

⁶² Hellenkemper 1984, 250. Hellenkemper's belief is based on Durliat's research on the Theodosian and Justinianic Codes and on the African inscriptions that mention the building of walls. Durliat concludes that the emperor played an important role in the construction of fortifications, he had to be informed of the works and approved the projects presented by the local administration: Durliat 1981, 93–114.

⁶³ Baldini Lippolis 2006, 294–5, with references.

⁶⁴ Mylonas 1961, 171–4; Baldini Lippolis 2006, 294.

⁶⁵ Mylonas 1961, 165 and 173–4; Fowden 1988, 50; Clinton 1989; Wilkes 1989, 192.

⁶⁶ Clinton 1989.

⁶⁷ On the general problem: Avramea 1997, 60–6; Baldini Lippolis 2006, 295 with references.

⁶⁸ Baldini Lippolis 2006.



Fig. 8 The Late Antique Wall of Eleusis (author's photo).

the contrary, they seem to have been protected by the new fortification. The effort to keep a monumental appearance to the entry of the Propylaeum is evident, even allowing for some structural alterations.⁶⁹

We can remember, at this point, the passage of Claudius Mamertinus on Eleusis' state of abandonment and the defence of Greece thanks to the fortifications promoted by Julian.⁷⁰ This allusion could offer, in fact, a further hypothesis – compatible with the few available elements as well with the isolated archaeological testimonies – on a rebuilding of the sanctuary in the second half of the 4th century.⁷¹

A useful comparative example is the sanctuary of Epidauros (Fig. 9). Recent research suggests the attribution of the Late Antique fortifications here to the second half of the 4th century, maybe after the earthquake of 365.⁷² the analogy between the two situations is quite close and in both cases the fortifications, built with *spolia* taken from ruined monuments, seem intended to defend the main pagan buildings, including temples and altars.

The case of Olympia, on the other hand, is quite different (Fig. 10). Here the Late Antique fortification includes the Kronos hill of and its southern slopes. At the north-west corner the temple of Zeus, still preserved to some height, is re-used as a rampart according to a system which is reminiscent of the Athenian internal walls in the area of the Library of Hadrian, while for the southern section one of the pre-existing porches is re-employed, again reflecting the Athenian situation.

The dating of this fortification is uncertain: it has been assumed that it followed some decades after the official closing of the sanctuary, between the end of the 4th and the beginning of the 5th century. If this is correct, its purpose would have been to safeguard the furniture and buildings of the dismantled sanctuary,⁷³ in conjunction with a process of Christianisation which is attested, after the middle of the 5th century, by the basilica on Phidias's *ergasterion* and by the development of a necropolis with more than 200 burials.⁷⁴ At least up to the middle of the 6th century, the development of this area, although deprived of its traditional functions, is attested by the continuity

⁶⁹ Baldini Lippolis 2006, 295.

⁷⁰ Claudius Mamertinus, *Gratiarum Actio de consulatu Iuliano* 9.3.4.

⁷¹ Baldini Lippolis 2006.

⁷² Baldini Lippolis 2006, with references.

⁷³ Sinn 2002.

⁷⁴ Vida & Völling 2000.

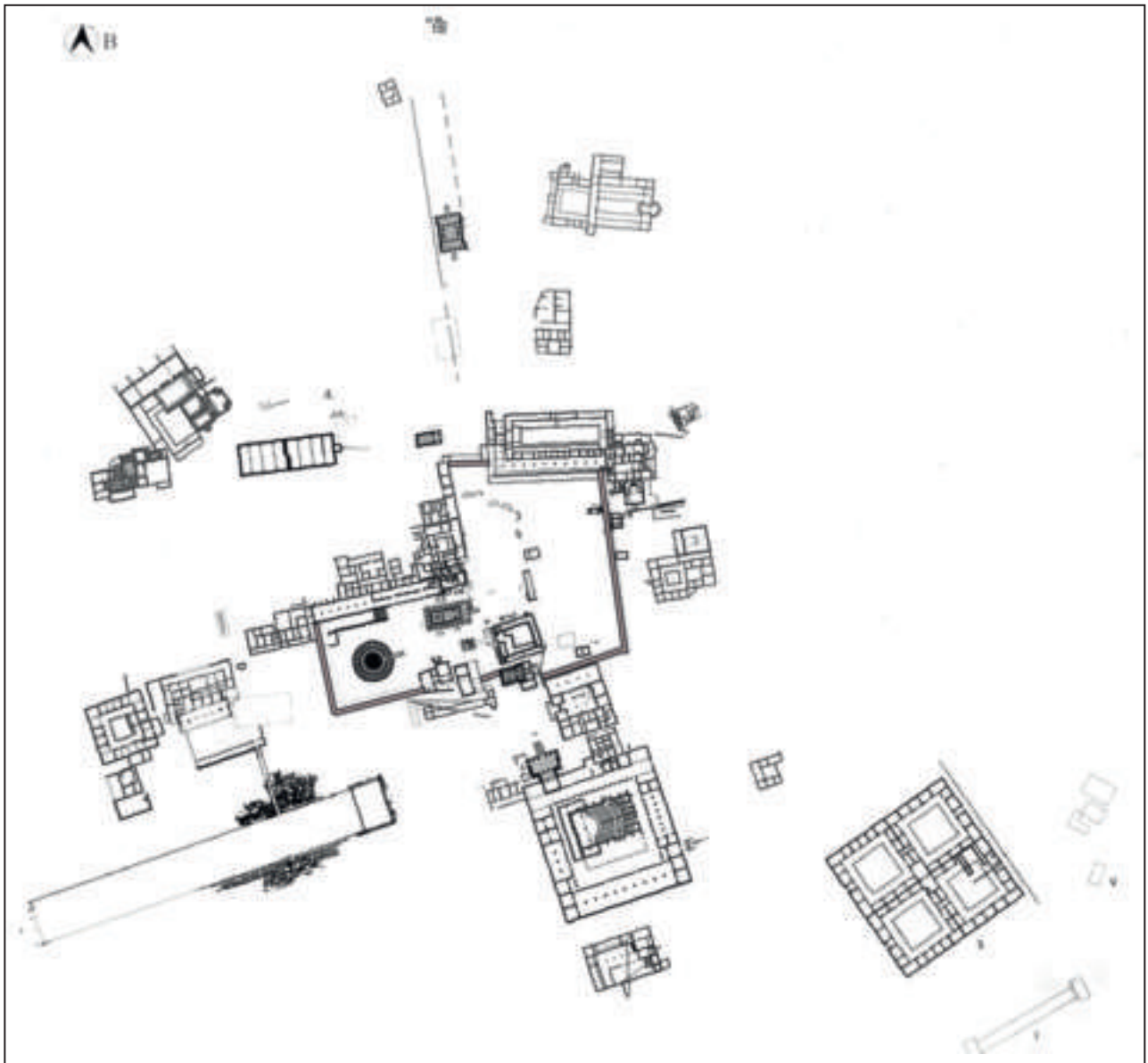


Fig. 9 Plan of Epidauros with the course of the Late Antique walls (from the plan of the archaeological site, redrawn by author).

of productive activities connected to the transformation of agricultural products.⁷⁵ It was by then an agricultural village without any monumental pretensions.

It cannot be excluded, therefore, that, as was perhaps the case in Athens, the walls of Olympia were built later than the 5th century, when the temple, as well as the southern stoa, were no longer of any real significance except as immediately re-usable structures along the perimeter of the area which had to be fortified. Indeed,

all the religious complexes outside the boundary were completely dismantled, including those of the northern terrace from the sanctuary of Hera and the stadium. The general impression is that the contraction of the settlement is not connected with a desire to protect some of the previous monuments, but with the needs of a rural community which, in its extent and functionality, is definitively remote from the late Roman functions of the sanctuary.

⁷⁵ Völling 2002.

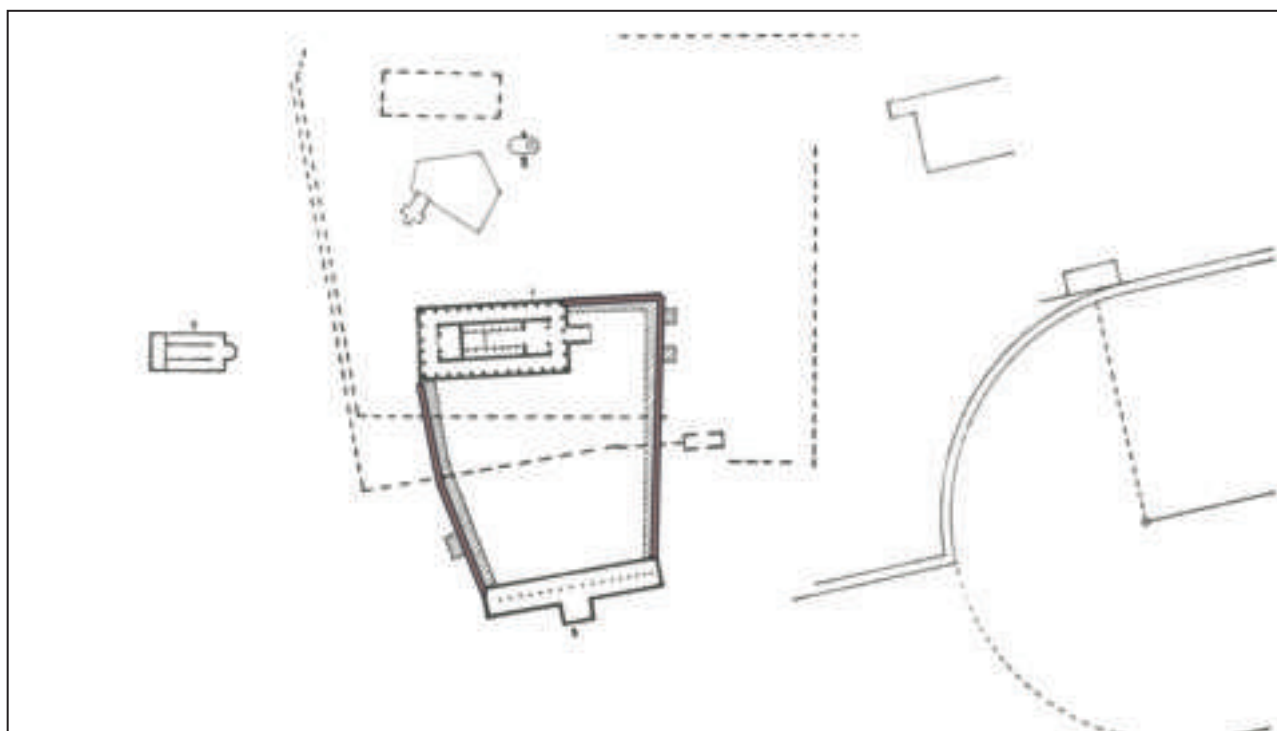


Fig. 10 Plan of Olympia with the course of the Late Antique walls (from Yalouris 1980, redrawn by author).

Such a situation is emerging in other cases, too, as for instance in Gortyn (Crete), where, probably between the 7th and the beginnings of the 8th century, the settlement contracts and is going to be confined within an area which corresponds to the acropolis and the ancient agora.⁷⁶

The case of Athens

Athens was an important centre for the study of philosophy and rhetoric in Late Antiquity, but it did not have any greater political or strategic significance within the Empire.⁷⁷ It was based in a province not particularly threatened by barbarian raids. The danger Athens faced should not, therefore, be exaggerated in comparison with cities like Thessaloniki. Nevertheless, Athens, too, participated in the general process of fortification in the 3rd century: it repaired and enlarged the Themistoclean fortification probably during the reign of Valerian.⁷⁸ A little later in AD 267 the Athenians had

to force back the Herulians on their own, while waiting for the imperial troops, as described by Dexippos and other literary sources.⁷⁹ Even if the description of the conflict by Dexippos might be exaggerated and full with literary *topoi*, it is not too difficult to imagine that imperial reinforcements were delayed because of the many problems on the frontiers of the Empire. According to the traditional interpretation, Athens received (a little after the attack) a reduced wall circuit (Fig. 2),⁸⁰ regardless of whether or not this is considered to be a direct consequence of the Herulian invasion. The building technique does not differ much from that of the 3rd-century repairs to the Themistoclean walls: a double-curtain wall, with the faces entirely built with re-used material, bonded with mortar (Fig. 3), while the core contains re-used material, rubble stones and mortar. If we accept the traditional date for the post-Herulian wall, Athens would be the only city among the examples considered in this paper, to have a reduced circuit wall constructed in the 3rd century. The strategic necessities

⁷⁶ Baldini *et al.* 2012. On the development of the city see in general Di Vita 2010.

⁷⁷ For the history of Athens in Late Antiquity see Di Branco 2006.

⁷⁸ The technique of the 3rd-century repairs to the Themistoclean walls is reminiscent of that of the circuits at Edessa and later in Corinth: a double-curtain wall, built with much re-used material in the faces and with a core of rubble stones and mortar. Theodoraki 2011, 131–3.

⁷⁹ SHA *Vita Gallieni* 13, 6–8; Zos. I 39,1 and 42–3; Zonar. 12, 23; *FHG* III for Dexippos.

⁸⁰ Frantz 1988, 5–11, 125–41; Theodoraki 2011, 133–4.

that led to the construction of reduced circuits and are linked with a new conception of the intra-mural area are not found elsewhere in Greece in this period. On the other hand it has often been observed that this wall does not reflect the dimensions of Athens in Late Antiquity.⁸¹ Building activity outside the post-Herulian wall is intensive in the 4th and 5th centuries and argues against a contraction of city life before the 6th century and maybe beyond.⁸² In this regard, the fact that the *necropoleis* remained outside the Themistoclean walls at least until the 6th century and in a few cases up to the beginnings of 7th century, seems especially significant.⁸³ As we have seen in the better documented cases of Corinth and Nikopolis the construction of a reduced wall circuit is coherent with its general urban development, as reflected in the abandonment of some public areas of the Roman city and the reorganization of its cemeteries. This is not the case of Athens in the 3rd century.

Another question concerns the significance of the area included in the post-Herulian wall. The walls protected the Acropolis, the most important religious pagan centre in Athens, which from the 5th century was slowly transformed into a focus of Christian worship.⁸⁴ The walls also included the two major imperial constructions at Athens, the Roman Agora and the Library of Hadrian, which had probably assumed a growing political and economic meaning in the Roman era, whereas the Classical Agora was left outside. Although it could have lost much of its political meaning it is difficult to think that this area was abandoned after the Herulian attack. The wells of the Agora testify to the clearing up of debris after AD 267. Statue-bases and portraits show that at the end of the 3rd and in the 4th century honorary monuments were still erected there. Contemporary with the construction of the Palace of the Giants on the Agora, at the beginning of the 5th century, street-colonnades were built or repaired to connect the Dipylon Gate with the Classical Agora, and in turn with the Roman Agora and the Library of Hadrian.⁸⁵ These building activities speak in favour of the enduring unity of the city centre in the 5th century. It is difficult to reconcile this unity

and the urban development of Athens between the 3rd and 5th centuries AD with the idea that the post-Herulian wall was constructed in the 3rd century.

The examples of other Greek cities and sanctuaries have shown that the process of fortification and the creation of reduced enceintes in Late Antique Greece are varied in form and chronology. But they were intended to defend the core of the city or of the sanctuary, and so, on first principles, it is difficult to understand if the post-Herulian wall at Athens was built in order to protect the pagan religious centre of the city, as we see in Eleusis and Epidauros, or its emerging Christian successor. The analysis of the dynamics that led to the construction of reduced enceintes in other Greek centres opens many questions about the uniqueness of the Athenian case. If the traditional date of the post-Herulian wall is to be retained, it needs to explain why Athens is the first city to construct a reduced circuit, still within the 3rd century, and how the incoherence between the existence of the post-Herulian wall, the Late Antique development of the city and the general pattern of other Greek cities can be reconciled.

The variety of the situations discussed in this paper does not permit the establishment of a univocal synthesis. On the contrary, it further highlights the necessity of contextualizing such fortifications through the analytical collection of information, paying special attention to the contextual data and to the integration of documentary sources of different types.

Within this framework, a mapping of the building and dismantling activities within Athens would be crucial to provide a better comprehension of the chronology of the internal walls and the evolution of the urban post-Antique space. In fact, it is difficult to explain the unique character of the 'post-Herulian' walls, if dated to the 3rd century, given that no other example of a double city wall is known from that period.⁸⁶ It would also be unique for a fortification to be built some years after an attack, just waiting for possible further threats.

⁸¹ Greco 2009, 217–20; Baldini Lippolis 1995.

⁸² At the end of the 3rd century the huge bath complex found in the excavation of Plateia Syntagma was built (Zachariadou 2008). During the 4th and the 5th centuries AD the residential district south of the Acropolis continued to be inhabited (Eleutheratou 2008), while lavish houses and baths were built on the Areopagos and in the eastern quarters. For the Areopagos see Frantz 1988, 37–48; for the building activity in the eastern quarters see Zachariadou 2008.

⁸³ This was highlighted recently in Tzavella 2008.

⁸⁴ For a discussion of the data on the transformation of the Parthenon into a church see Baldini 2012; Korres 1994; Kaldellis 2009; Di Branco 2009; Saradi 2011, 267–70.

⁸⁵ Baldini Lippolis 2003.

⁸⁶ See, for example, Veikou 2012, 53–4, with references.

The limitations of the direct archaeological evidence in many of the analysed examples shows the necessity of using other research tools as well, verifying the role of the settlements in the defensive framework of the territory concerned, as well as the modes of selection of the areas to be fortified in cities or sanctuaries with a high public monumentalization level, also considering the value of the abandonment of areas and buildings and trying to identify the authority responsible for the planning and economic choices.

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THE BENIZELI MANSION EXCAVATION: LATEST EVIDENCE ON THE POST-HERULIAN FORTIFICATION WALL IN ATHENS

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Abstract

This article aims mainly to present new evidence on the Post-Herulian fortification wall, a section of which came to light during the excavation carried out in 2008 by 1st EPCA, beneath the northern courtyard of the Benizeli mansion, at 96, Adrianou Street, on the occasion of the restoration of the building. The Post-Herulian wall, erected after the disastrous attack of the Herulians against Athens in AD 267, enclosed only a very small part of the urban area protected by the Valerian city wall. The archaeological and stratigraphic evidence obtained during the excavation, reinforced the viewpoint which determines the construction of the inner circuit wall of Athens to the first decades after the Herulian invasion. A well-preserved section of the north flank of the wall was uncovered between the rectangular tower that protected the north-eastern angle of the curtain and a postern a little further west. It is 8.80 m long and 2.20 m high, and entirely built of poros stone blocks laid in pseudo-isodomic masonry. The fortification wall came to light along with rubble masonry walls belonging to buildings built in front of its façade during the Middle and Late Byzantine period, before being completely covered by buildings of the Ottoman period. Interesting information about the ancient road network also derives from the excavation along the same face of the wall, where a street running in an east–west direction was discovered. Furthermore, during the excavation in the same area, a stone-built cist grave that possibly dates from the end of the 6th or the 7th century AD, was also revealed.

In the summer of 2008, the 1st Ephorate of Prehistoric and Classical Antiquities (1st EPCA) carried out a rescue excavation in the area of Plaka, in the center of Athens, in order to reveal the section of the Late Roman fortification wall (Plan 1) within the ‘Benizeli mansion’ property, on 96 Adrianou Street. This investigation fills the gap

between the already known sections of the wall found in two adjacent buildings,¹ namely, the property of 94 Adrianou Street on the west,² where part of the wall and a postern are preserved, and the building of the former conservation workshop of the 1st Ephorate of Byzantine Antiquities (1st EBA) on the east, 96b Adrianou Street,

¹ For a complete description of the west side of the wall, excavated by the American School of Classical Studies at Athens, see Travlos 1988, 125–41; for a description of the sections discovered by the 1st Ephorate of Prehistoric and Classical Antiquities (Α΄ ΕΠΚΑ), see Tsoniotis 2008, 55–74. See also Sourlas 2013, 152, 155–9; Tsoniotis 2014a, 61–6, and Tsoniotis 2014b, 73–5.

² Dontas 1976, 16–17, table. 1, pl. 29α–β; Travlos 1988, 137; Tsoniotis 2008, 65, fig. 14.



Plan 1 Post-Herulian wall, general topographic plan (1:1000, drawing: J. Travlos, updated version –1st EPCA archive).



Fig. 1. General view of the excavation, from east (author's photo – 1st EPCA archive).

where a section of the wall and the western side of the rectangular tower that protected the north-eastern corner of the fortification are also preserved.³

According to the prevailing view, the construction of this circuit wall was a direct result of the invasion of the barbaric tribe of Heruli in Athens in 267 AD.⁴ For this reason, after the discovery of its western side during the excavations of the American School of Classical Studies at Athens, this wall became known as the Post-Herulian wall, distinguished in this way from the other Late Roman fortification wall of Athens, erected a few years before the raid of the Heruli, under the rule of the Emperor Valerian. Valerian's wall, mainly built on the remains of the Classical-Themistoclean wall, included

also the eastern part of the city, that is the area to the north-north-east of the temple of Zeus, also known as the 'city of Hadrian'.⁵ As we already know, the defenders of this large fortification wall circuit were unable to withstand the Herulian raid, thus the city was captured and heavily damaged.

Subsequently, the erection of the Post-Herulian wall brought a radical change to the topography of Athens, since only a small section of the city north of the Acropolis, probably along with a small section on the south, was included within its circuit. The south end of the west side of the wall was built against the northern retaining wall of Mnesikle's Propylaia to the Acropolis and the whole western side ran along the eastern side of the Panathenaic Way, till the north side of the Stoa of Attalos; then the wall, running eastwards, extended to the south-west corner of Hadrian's Library, whose west, north and east sides were reinforced, in order to become part of the new fortification itself. Then, from the area of the south-east corner of the same building, the wall followed an east-west direction, along the south side of the modern Adrianou Street, being built over ruins of buildings such as the so-called 'Pantheon' or 'Panhellenion', and ending at the area of the so-called 'Diogheneion'. Finally, the wall turned southwards probably ending against the north-east part of the Acropolis rock.

Different sections of this inner circuit wall to the north of the Acropolis have been documented during numerous excavations and other works, unlike the circuit to the south of the Acropolis that was probably built during the same period. The existence of the southern sector of the Post-Herulian wall has not always been accepted,⁶ but it seems that, following the same course as the Turkish Serpentzès bastion,⁷ it included the area extending from the Odeum of Herodes Atticus to the west section of the retaining wall of the *koilon* of the Theatre of Dionysus, thus contributing to their existence until today.⁸ Between the two monuments, the north wall of the Stoa of Eumenes was incorporated in the Post-Herulian wall.⁹

³ Τσωνιώτης 2008, 65–6, fig. 15.

⁴ Shear 1938, 332–3; Dinsmoor 1940, 52, note 121; Travlos 1960, 128–9, pl. VI; Frantz 1988, 1–11, note 2; Travlos 1988, 125–41; Clinton 1989, 1535–6, notes 194–6; Tanoulas 1997, 16–17, 265; Tsoniotis 2008, 69; Vlachoyanni 2007–2008, 114–16; Bouras 2010, 30–2; Theocharaki 2011, 133–4.

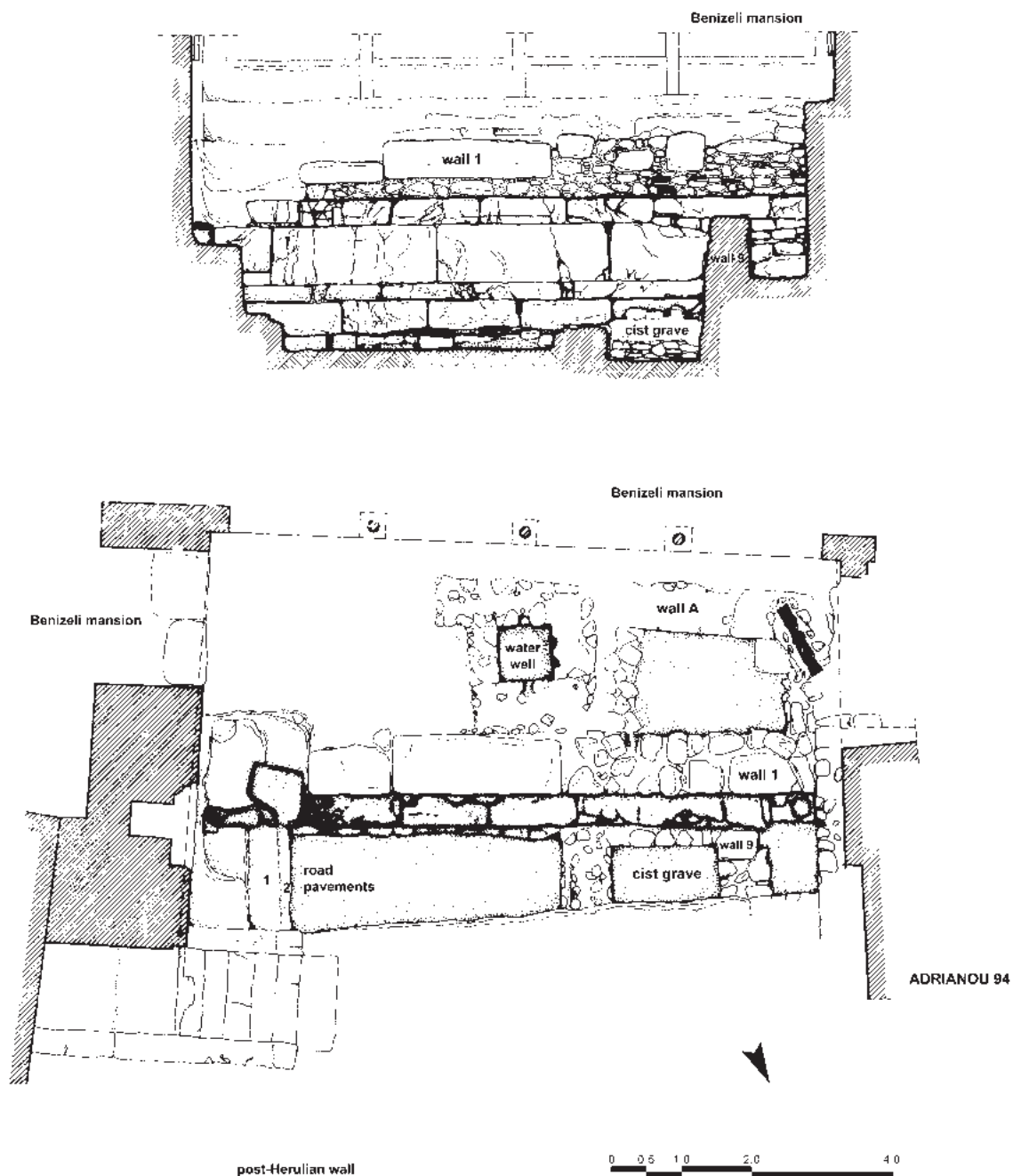
⁵ Frantz 1988, 1; Travlos 1988, 125–41. Concerning the ancient sources that provide information about Valerian's building programme for the reconstruction of the neglected fortifications of Athens, see Zosimus I, 29.23–5; Syncellus 381.8–15 (*CSHB* 715); Zonaras XII, 23.

⁶ Frantz 1988, 5–6; Travlos 1988, 125.

⁷ Travlos 1960, 178, pl. X; Tanoulas 1997, 265–7.

⁸ Korres 1980a, 18–19, pl. 11; Korres 1980b, 19; Tsakos 1989, 344. Tsakos related the fortification of the south slope of the Acropolis to the fortification building programme realized during Valerian's reign (253–60); Kazanaki-Lappa 2002, 640; Castrén 1994, 1; Tanoulas 1997, 265–7; Camp 2001, 223, 225; Tsoniotis 2008, 68; Theocharaki 2011, 133–4, note 187, fig. 35.

⁹ See, Makri 1989, 351–2, 354, 357–8, figs 42, 46.



Plan 2 General plan of the excavation and front view of the outer face of the Post-Herulian wall – viewer looking south (1:50, drawing: G. Kremmidioti – 1st EPCA archive).

It must be emphasized that the historic building of 96 Adrianou Street, granted to the Greek Orthodox Church by the Ministry of Culture, is the oldest surviving house in Athens, once owned by the distinguished Athenian Benizeli family. This was the family of Saint Philothei,

who lived from 1520 to 1598. The Benizeli mansion, still inhabited until approximately the 1960s, was a residence typical of the Ottoman period, probably built in the early 16th century, even if in its present state it probably dates back to the last decades of the 18th century.¹⁰ The

¹⁰ Travlos 1960, 224, 227, note 3, fig. 152; Biris 1987, 21–3, figs 6.1–2, 7.

building remained closed until 2008, when restoration works began under the supervision of the Greek Ministry of Culture. In accordance with the initial project and due to its historical and architectural value, the mansion will be transformed into a museum, as a typical example of a residence of the Ottoman period.

The excavation work of the 1st EPCA took place in the north courtyard of the property (Fig. 1, Plan 2),¹¹ while other excavation work was simultaneously carried out by the 1st EBA, in the north-east part of the same courtyard as well as inside the residence and along its south side. In the initial phase of the 1st EPCA excavation, mostly recent architectural structures were identified, such as the lower part of a 20th-century wall which divided the courtyard of the residence into two parts, and a stone-built well manhole of the same period, equipped with an ancient wellhead and roughly built on the mansion's water well. In the surface excavation layer several more recent clay pipes were identified, along with a stone-built conduct.

The discovery of the Post-Herulian wall was realized in an excavation trench to the north of the mansion's façade. The excavation reached a depth of 3.50 m from the initial ground level and 4.13 m under the level of the floor of the mansion's portico; among other structures, a section of the outer face of the wall, 8.80 m long and 2.20 m high, down to the level of the euthynteria was revealed (upper surface: 72.454 m a.s.l.) (Fig. 2, Plan 2). Similar to other parts of the enceinte, this section of the curtain was built with re-used poros stone blocks of unknown provenance, which had been placed on courses of different heights, thus forming a well-built pseudo-isodomic wall.¹² The euthynteria, uncovered to a height of 25–30 cm, protrudes 13 cm from the wall's façade and is also made of poros for the most part, whilst there are also sections including marble architectural elements. The use of lime mortar can be observed in some places at the joint between the lower course of the façade of the wall and the upper surface of the euthynteria; fragments of bricks and marble slabs were introduced upon the same surface, in order to form the horizontal level for the resting surface of the first course of the wall.¹³

At the beginning of the excavation, the surface of a poros block parallel to the façade of the mansion was uncovered at a short distance to the north of its colonnade on the ground floor. The excavation of a trial trench along the



Fig. 2 Post-Herulian wall, outer face (author's photo – 1st EPCA archive).

north side of the poros block (Fig. 3, Plan 2), showed that it was part of the upper surviving course of a masonry wall (wall A); it contained a filling, composed of reddish brown sandy soil, with rough stones, marble, limestone and brick fragments, initially associated with that which originally filled the space between the two faces of the Post-Herulian wall. Uncovering the lower part of the wall, a well-built rubble masonry was found which could not be dated earlier than the Late Byzantine period, since the filling contained by wall A was possibly disturbed by the builders of the wall itself or by the builders of the mansion's water well. Based on the few pottery sherds that were found in the trial trench, it was observed that wall A most probably dates back to the Ottoman period. Furthermore, a large group of architectural members was found during the excavation, mostly in the same filling, consisting of approximately 50 parts and fragments of Ionic columns, one almost intact column neck, along with fragments of two others, parts of Ionic column bases and marble cornices, part of a flank sima and a marble lion head water spout.

As was observed from the beginning, the fortification wall was used as the foundation of a strong rubble masonry structure – wall 1 – dating back at least to the

¹¹ See also: Tsoniotis 2012, 109–10, figs. 10–11; Trianti, A.-I., Choremi, A., Mantis, A. 2012, 11, fig. 20.

¹² For building issues regarding the Post-Herulian Wall, see Travlos 1988, 126–7; Tsoniotis 2008, 68.

¹³ The same building technique can be observed at the neighbouring section of the wall and at the postern uncovered in the property of 94 Adrianou Street. See Tsoniotis 2008, 65, figs 13–14.



Fig. 3 Wall A and trial trench to the north (author's photo – 1st EPCA archive).



Fig. 4 Wall 5 building and floor (author's photo – 1st EPCA archive).

16th century (Fig. 1, Plan 2), likewise a small cistern to its north side. The foundation of the above-mentioned wall was built for most of its width on the uppermost surviving course of the Post-Herulian wall. Descending to a slightly lower level, four rubble masonry walls – 5, 7, 8 and 9, running north–south – were discovered within the

excavation trench north of the curtain's outer face (Plan 3); the four walls, dating from the Middle (12th century) to the Late (13th–14th century) Byzantine period, were erected against its façade, which constituted the south side of the spaces they formed. At the beginning of the excavation, it was found that between the 13th and 14th century a building – wall 5 – possibly a residence, was also bedded directly on the uppermost surviving course of the Post-Herulian wall (Fig. 4, Plan 3). The building's floor, a hard packed layer of red clay and soil was revealed to the west of wall 5, along with the surface of the façade of the fortification wall. A second rubble masonry wall – wall 7 (Plan 3) – just west of wall 5, also dates between the 13th and 14th century, based on the dating of the pottery found during its dismantling (SU 32).¹⁴ Thus, it becomes clear that walls 5 and 7, dated around the same period, constitute a *terminus ante quem* with which to determine with enough accuracy the time at which the Post-Herulian wall was abandoned and its progressive covering by the buildings of Late Byzantine Athens began.

However, during the 12th century or very early in the 13th century at the latest, another building had already been built at a lower level, in front of the wall's façade and in contact with it; thus, revealing the third course of the wall, another rubble masonry wall was uncovered: wall 8 (Plan 3). At the same time, removing SU 33, dated between the late 13th and the 14th century, west of wall 8, a more solid rubble masonry wall – wall 9 – was found. Furthermore, it was found that SU 40, excavated along the foundation of the latter, dates approximately to the second half of the 12th century, and can be considered as a *terminus post quem* for the construction of wall 9.

The same layer can also be considered a *terminus ante quem* for the partial destruction of a stone-built cist grave,¹⁵ which is the first tomb discovered along the outer face of the Post-Herulian wall.¹⁶ The tomb, not preserved to its entire height, was partially uncovered beneath wall 9, lying against the façade of the Post-Herulian wall at the depth of its euthynteria, oriented east–west (Fig. 5, Plans 2–3). The inner side of the eastern wall of the tomb is 0.62 m long, whereas its south side has been only partially uncovered to a length of 1.35 m along the fortification wall; the grave is preserved to a height of 0.84 m, its walls are 20–25 cm thick and it is mainly made of rough stones, brick and

¹⁴ SU = Stratigraphic Unit.

¹⁵ This type of grave is encountered both in the Early Christian and Byzantine period. Regarding stone-built cist graves in Greece, see Laskaris 2000, 298–300; Marki 2002, 165; Marki 2006, 106–9; Rife 2012, description of the graves, 25–98; for graves of the same type in Athens in particular, Laskaris 2000, 147–56 and notes 346–8; for early Christian burials inside the Valerian circuit wall, Laskaris 2000, 151 (ac).

¹⁶ About Late Roman–Early Christian cemeteries in Athens, see Baldini-Lippolis 1995, 171, 174–5, 182, note 30; Travlos 1960, 145–6, note 1, pl. VII; Papaeuthymiou 2012, 98–9.



Plan 3 Main phase of the excavation (1:50, drawing: author – 1st EPCA archive).

marble fragments, sculptures included. The thin layer of red plaster of the lateral surfaces of the grave's walls is only locally preserved, but still bears vertical incisions, probably in order to support a second layer of plaster.

Additional interest is provided by the presence of human remains reburied into a shallow trench, adjacent to the east side of the grave (Fig. 6, Plan 3). The secondary burial area, 0.88 m long and 0.87 m wide, was uncovered on the surface of a street which will be discussed later. The east side of the trench had a semi-circular shape and it was cut into the upper road pavement of the same street; westwards, the boundary line of the secondary burial was formed by small rough stones. The bones, mostly skulls, belonged to 11 adults at least and they were covered by a deposit containing Middle Byzantine pottery, dating between the 11th and 12th centuries.¹⁷

The cist grave was discovered and partly uncovered following the removal of a deposit (SU 40 and SU 38) which, as we have already observed, dates approximately to the second half of the 12th century,¹⁸ establishing a *terminus ante quem* for the disturbance of the burial or the burials initially present. It is worth noting that a fragment of red plaster from the grave's walls was found on one of the stones used in the western side of the adjacent secondary burial. In any case, the upper, missing part of the cist grave was probably dismantled during the construction of the wall 9 building. The first two layers removed from the grave's interior mainly contained Middle Byzantine pottery, the presence of which is most probably related to the secondary burial. Following the removal of the lowest layer (III) from the grave's interior, its floor was uncovered;¹⁹ it was made of small rough stones and fragments of tiles and bricks, red clay and on top of

¹⁷ See White Ware III pottery, in Hayes 1992, 29–30.

¹⁸ For example, see no. 202 in Papanikola-Bakirtzi 1999, 175; See Sgraffito bowls A52, 71 and Sgraffito plate A32 in Frantz 1938, 445, 452, figs 8, 13.

¹⁹ For the types of pavements in stone-built cist graves, see Laskaris 2000, 275–6; Marki 2006, 106–8.



Fig. 5 Post-Herulian wall and cist grave against its façade (author's photo – 1st EPCA archive).



Fig. 6 Post-Herulian wall (on the left) and secondary burial area (author's photo – 1st EPCA archive).

it a thin layer of grey mortar. It should be noted that during the removal of this layer, twenty-one fragments of marble slabs were found: thirteen fragments of white – mainly Pentelic – marble, one fragment of marble from Skyros, two fragments of marble from Hymettus, four fragments of Karistos marble (*Cipollino*) and one Phrygian (*Pavonazzeto*); many of them have remains of plaster still preserved on one of their sides, indicating that they probably belonged to a pavement or to the revetment of a wall's surface, possibly of the grave itself. This particular layer, based on the pottery that comprised mainly late Roman coarse-ware,²⁰ can be dated from the end of the 6th to the 7th century AD, though it also contained a Late Byzantine sherd – probably zeuxippus ware – dated to the 13th century,²¹ perhaps an intrusion from the upper layers; it is important to observe that no other layer of the same period was found during the excavation of our trench. In any case, the lowest layer from the grave's interior could probably be chronologically associated with the first

burial located within the grave, although the stratigraphic situation and the date of the grave were rendered doubtful due to the interference of the secondary burial and the construction of the wall 9 building.

Two consecutive road pavements of a street leading downhill to the west were uncovered along the outer face of the Post-Herulian wall (Fig. 7, Plan 2). The surface level of the first road pavement, which probably 'respected' the presence of the cist grave, corresponds to the middle of the first course of the fortification wall. This has a very compact layer containing white mortar, gravel and fragments of schist on its surface. Within the road pavement, plain utilitarian pottery was found along with a pottery sherd belonging to the 'plain glazed wares in a red and grey fabric' and possibly to a chafing dish, which can be dated from the second half of the 11th to the early 12th century,²² along with the upper road pavement.

²⁰ For example, see Hayes 1992, type 9B, 62, 66, 100–1, 224, fig. 22.10; Kormazopoulou, L. & Chatzilazarou, D. 2010, 171–2, 177, figs 3β, 5β; Vroom 2005, 52–3, fig. 12.1.

²¹ See Μακροπούλου 1995, nos 13, 12, 25; no. 70 in Papanikola-Bakirtzi 1999, 71; Kalopisi-Verti 2003, no. A10, 60–1; Vroom 2005, nos 1.2, 2.2, 108–11.

²² See 'brown glazed ware' in Frantz 1938, 433, 457, B2, fig. 19; 'Plain-glazed wares/'brown glazed wares', in Morgan II 1942, 36–42, 178, nos 1–2, 5 fig. 25; Coarse glazed ware IV, in Hayes 1992, 41–3, 219–20; Armstrong 1993, 310, no. 122, pl. 32; Μονόχρωμη κεραμική από ερυθρωπό πηλό (plain glazed ware – red ware), in Kalopisi-Verti 2003, 59, A5; plain glazed wares, in a red and a grey fabric, in Vroom 2003, 147/6.3.3; Vroom 2005, 72–3, fig. 3.3.



Fig. 7 Post-Herulian Wall, outer face and road pavements 1 and 2 (author's photo – 1st EPCA archive).

The second road pavement (SU 48), more compact and harder than the first one, was cut by the builders of the above-mentioned tomb; measuring 15 cm in thickness, it covered the lower part of the first course of the wall as well as the upper surface of the euthynteria (Fig. 7); its fill contained clay, a few fragments of white lime mortar, *cocciopesto* hydraulic mortar, very small fragments of bricks and tiles, fine gravel, but also much evidence of fire, mainly coal. During the removal of this road layer, apart from the pottery and an exceptionally worn bronze coin, a second bronze coin (ΠΑ 2610 – Reverse: owl, olive tree, ΑΘΗ) was also found, preserved in a better condition (Fig. 8); it belongs to the Athenian coin production during the reign of Emperor Gallienus, and can be dated between AD 264 and 267.²³ It was found a few centimetres below the upper surface of the euthynteria and can be considered a *terminus post quem* for the lower road pavement. Furthermore, the dating of the pottery of the same layer coincides approximately with that of coin ΠΑ 2610, since the latest pottery sherds are dated to the middle of the 3rd century AD, although earlier pottery is

also present, reaching back to the late Hellenistic–early Roman times. Indicative of the dating of this layer is a part of a bowl, with examples of the same type also found within late Roman layers of the Ancient Agora (Fig. 9).²⁴

Interpreting the chronological gap between the two road pavements, we could assume that those dating between the end of the 3rd and the 12th centuries were removed before the laying of the upper road surface discovered in the excavation trench. Removing remains of older road surfaces in order to lay a new one was not unusual. Field research brought to light similar situations elsewhere, for example the so-called ‘Areopagus Street’, where a road pavement of the 4th century BC was found to be covered by a layer dating to the Ottoman period.²⁵

With regard to the street to which the two road pavements belonged, we can assume that it is the ancient street which, starting from the north-west part of the Ancient Agora, passed between the Roman Agora and Hadrian’s Library and leading eastwards, followed a route corresponding to today’s Adrianou Street. Further east, it led to the Mesogheia area through the gate of Diochares of the Themistoclean circuit wall, but also through the corresponding gate on the east side of the fortification, since the era of the new – Valerian’s – circuit wall.²⁶ Until now, several sections of this street have been discovered, but what is of great interest in our case is the section of the same road, uncovered during the excavation of the adjacent postern of the Post-Herulian wall, on the property of 94 Adrianou Street.²⁷

The excavation was concluded with the removal of SU 50 under the second road pavement, further revealing the euthynteria of the wall. It was a deposit consisting of brown, wet soil with marble chips and fragments of Athenian schist rock (*kimilià*). The pottery of the layer dates, as well as that of the overlying road layer, back to the middle of the 3rd century AD. A dish of a type typical of this period (Fig. 10), also found within pre-Herulian layers of the Ancient Agora, dates to the middle of the 3rd century AD.²⁸

The analysis of the archaeological data that emerged during the field research at the Benizeli mansion led

²³ Kroll 1993, period VI coinage, 116–18, 159–60, pl. 21, nos 377–82.

²⁴ See K31 in Robinson 1959, 62, pl. 12.

²⁵ Kostaki 2009, 102.

²⁶ Travlos 1960, 95–6, pl. V; Travlos 1971, 159–60, 170, fig. 220; Ficuciello 2008, 175–7, pls I–II; Korres 2009, 75, fig. 4.1; Kostaki 2009, 109, fig. 5.15; Taxiarchi 2009, 174, fig. 12.3.

²⁷ Dontas 1976, 16–17, plan 1, pls 29α–β.

²⁸ See K5 and K13 in Robinson 1959, 60–1, pl. 68.



Fig. 8 Gallienus bronze coin from road pavement 2 (photo: E. Bardani – 1st EPCA archive).



Fig. 10 Late Roman dish from SU 50 (photo: E. Bardani – 1st EPCA archive).

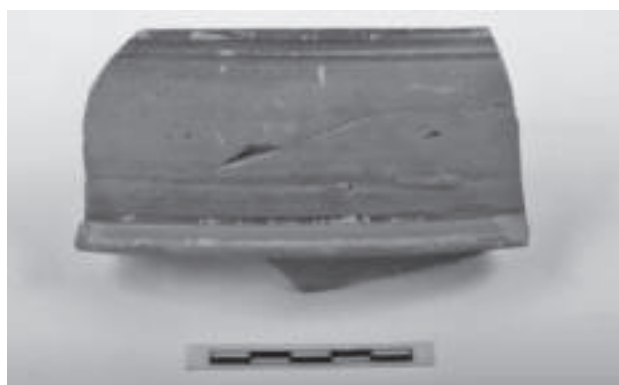


Fig. 9 Late Roman bowl from road pavement 2 (photo: E. Bardani – 1st EPCA archive).

to some interesting conclusions regarding not only the Post-Herulian wall, but also the architectural remains dating from the Byzantine to the Ottoman period. The uncovering of the foundation of the wall 5 building, which is dated to the 13th or 14th century and stands on the upper preserved course of the Post-Herulian Wall, offers important evidence concerning the time of the dismantling of the elevation of the wall; furthermore, a layer which covered the surface of the wall, SU 36, based on the pottery that it contained is dated approximately around the 13th century but definitely not later than the 14th. Therefore, between the 13th and the 14th century

the dismantling of the upper courses of this section of the Post-Herulian fortification wall had already occurred. However, the wall went out of use approximately during the middle of the 12th century, when the wall 9 building was built in front of its façade, likewise the wall 8 building that was built at the beginning of the 13th century at the latest. Finally, as we have already seen, road pavement 1 was the latest road pavement laid along this section of the Post-Herulian wall façade, about 50 years before the construction of the wall 9 building and the abandonment of the fortification. This evidence is compatible with the information that came up during the excavation of the 94 Adrianou Street property, where the excavators found out that this section of the Post-Herulian wall was partially destroyed during the Middle Byzantine period.²⁹ In any case, the evidence coming from our excavation is closely related to the fact that between 10th and 12th centuries, the city of Athens flourished once again and expanded in the area between the Valerian and the Post-Herulian Wall.³⁰ Furthermore, the construction of the Rizokastro fortification wall around the Acropolis in the 13th century appears to be closely connected with the abandonment of the Post-Herulian wall³¹ that had already occurred and is well documented due to the new evidence from the Benizeli mansion excavation.

Regarding the date of the inner circuit wall of Athens, the viewpoint of the excavators of the Ancient Agora,

²⁹ Dontas 1976, 16–17, plan 1, pls 29α–β.

³⁰ Travlos 1960, 151; Bouras 2010, 25.

³¹ Prof. Charalambos Bouras suggests that the ‘Rizokastro’ fortification wall was built between the end of the 12th century and the beginning of the 13th century, in preparation for the expected siege of the Acropolis by Leon Sgouros: see Μπούρας 2010, 40; the same circuit wall was dated in 1204 by Arthur Parsons, in Parsons 1943, 251, 259, 263, fig. 40; John Travlos dated the Rizokastro wall to the Byzantine era and specifically during the 11th century; he also wrote that the section of the Post-Herulian wall in the area of the Peripatos and Klepsydra, was systematically demolished, in order to ‘provide material for the construction of the Rizokastro’: see Travlos 1988, 125, 128, 138, note 15.

according to which the wall was built during the reign of Emperor Probus, around 15 years after AD 267, has been generally acknowledged and accepted. This dating, mainly based on the numismatic evidence from the foundation of a section of the west side of the wall on the floor of the Klepsydra,³² is not accepted by all researchers.³³ On the contrary it has been strongly argued and suggested that the dating should be postponed to the 5th or 6th century.

As we already have seen, the existence of two successive road pavements was ascertained along the outer face of the wall, with the lower one covering the euthynteria; based on the pottery it contained and, mainly, on the Athenian bronze coin of Gallienus' age, this road pavement can be dated back to the last decades of the 3rd century. This dating is also reinforced by the underlying layer (SU 50), dated around the mid-3rd century. Despite the limited width of the excavation trench, it is important that both the road pavement 2 and the SU 50 are preserved along the entire excavated section of the wall, thus being rather safe as chronological data. Regarding, in particular, the numismatic evidence from the road filling, it seems that striking of this coin series probably began in connection with Emperor Gallienus' visit to Athens, where he stayed for a month during the autumn of 264.³⁴ It is important to note that these coins, as Kroll wrote, 'remained in circulation for a short time after the Herulian sack, until the increasing inflation of the 3rd century (270s) drove them out of use'. Furthermore, we must not forget that after the monetary reform which was imposed by Emperor Diocletian, at the end of the 3rd century *folles* replaced the pre-existing bronze currencies, which would not remain in circulation for long. Therefore, considering very carefully all the archaeological and stratigraphic evidence obtained through the Benizeli mansion excavation, I believe that it greatly reinforces the viewpoint which determines the construction of the inner circuit wall of Athens, better known as Post-Herulian wall, to the first decades after the Herulian invasion, towards the end of the 3rd century AD and the beginning of the 4th.

In conclusion, it is quite clear that the results of the archaeological investigation of the 1st EPCA at the Benizeli mansion emphasized the concept of the stratification of urban life in Athens, where the architectural remains of previous phases either disappeared or were embedded

in the remains of the succeeding centuries. The latter is the case of the outer face of this section of the Post-Herulian wall, uncovered at 96 Adrianou Street, being incorporated in buildings, possibly houses of the Middle and Late Byzantine period, before being completely covered during the Ottoman period.

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³² Shear 1938, 332, figs 13–14; Setton 1955, 233; Frantz 1988, 6.

³³ Greco 2010, 217–33; Baldini Lippolis 2006, 295, note 322; Di Branco 2006, 69–71; Armstrong 1987, 235–58; Greco 2002, 598; Kazanaki-Lappa 2002, 640; Baldini Lippolis 1995, 174–5, note 43.

³⁴ Kroll 1993, 118.

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